Sandia Weapons Competence Brings Lab Aerospace Work Says Seaborg

Glenn T. Seaborg, Chairman of the Atomic Energy Commission, has told the Senate Committee on Aeronautical and Space Sciences that there is no substitute for nuclear power for extended space missions. He also told the committee that SNAP and Rover program contractors factor safety into their development program from the beginning and exercise considerable care to assure safe nuclear system designs.

Dr. Seaborg pointed out that "Because of their competence in obtaining an unusually high degree of reliability and safety in nuclear weaponry, we have assigned the Sandia Corporation the task of making independent assessment of the safety of all of our nuclear aerospace systems."

The fact that nuclear aerospace power systems present unique safety problems compared to those encountered in conventional systems has been recognized at the outset, according to the AEC Chairman.

"One problem we must obviously face," Dr. Seaborg said, "is how to safely handle satellite nuclear power supplies when the orbit decays and the system reenters the earth's atmosphere."

Pointing out that it is essential that we maintain a strong development program to meet requirements of the national space effort, Dr. Seaborg said, "Our program is aimed at the development of the technology required and the demonstration to those planning space missions that nuclear devices are suitable, feasible, and economical sources of power."

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lab news

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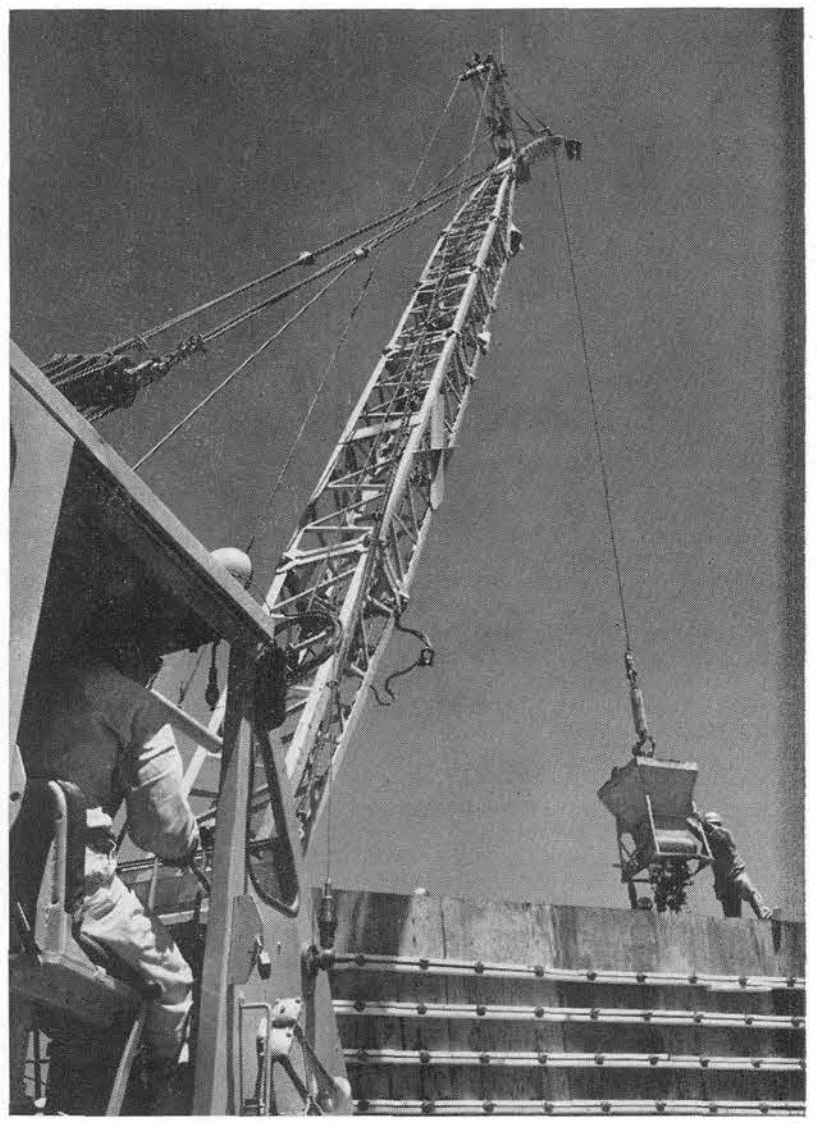
DISCUSSING policy matters are the director and department managers of the 3400 organization (l to r) J. W. Galbreath, Manager, Public Relations and Employee Publications Department 3430; K. A. Smith, Director of Information, Publications and Public Relations 3400; M. K. Linn, Manager, Technical Information Department 3420; H. W. Maglidt, Manager, Graphic Arts Department 3460; and F. H. Grubbs, Manager, Electronic Data Processing Department 3450. The 3400 organization provides Sandia with information support.



NEW ADDITION to Bldg. 803 includes a two-ft.-thick reinforced concrete shielding wall. Workmen last week were constructing a new radiation effects laboratory to the Van de Graaff building used by Radition Physics Department 5310. The new lab will contain 2100 sq. ft. A 296-sq.-ft. service area for the building is also under construction. Plant Engineering Department project engineer is V. E. Kerr. (4543-3). Completion of the project is expected in early September.

Patent Assigned to AEC in Name of Russell L. Maxwell

A patent for an acceleration responsive device has been assigned to the Atomic Energy Commission in the names of Russell L. Maxwell, supervisor of Environmental Sensing Devices Section II. 1332-4, and Alex F. Chabrek, a former Sandia Corporation employee.

The device is an accelerometer capable of operating a circuit or mechanism at a predetermined high level of acceleration, and then of operating a second circuit, mechanism, or reset circuit at a predetermined lower level of acceleration.

The invention further contemplates the provision of controlling a circuit or mechanism, or a pair of such circuits or mechanisms at different acceleration levels by providing a movable circuit closing mass controlled by a bias which can be preset to close the circuit at predetermined and different acceleration levels.

The patent, issued July 2, 1963, is No. 3,096,411.

3400 Organization

Information - - All Kinds - - That's Their Business

Information — technical and administrative, internal and external — is the concern of the Organization 3400 staff. They support Sandia's mission with information handling techniques.

"We acquire, prepare, process, store, retrieve, and disseminate information, both technical and administrative," says K. A. Smith, Director of Information, Publications, and Public Relations.

"Sandia's research and development activity calls for a synthesis of information and ideas," Mr. Smith points out. "Knowledge is brought into, originates within, and is disseminated from the laboratory. Both the raw material used in the laboratory and the product coming from it are information in some form.

"The 3400 organization is concerned with the acquisition of the newest available information, and with the shaping and finishing of this product. To accomplish this, the organization maintains a highly competent staff of information and communications personnel. These people maintain a continuing concern with the innovation and improvement of communication and information-handling techniques."

Technical Information

Technical Information Department 3420, managed by M. K. Linn, offers close support to Sandia's technical organizations in the generation of technical information. "Department 3420 provides a source for the information used by the technical staff in their projects," Mr. Linn says. "As these projects proceed, reports of their evolution are prepared; 3420 provides support to the production of these reports. We provide classification guidance, not only for technical information, but for administrative and public information as well. And we provide editorial and administrative support to management."

Library facilities serve as a valuable source of ideas and information; Sandia's technical library strives to make its collection as accessible and useful as possible. Technical Library Division 3421, supervised by L. F. Parman, is an area characterized by rapid growth and innovation.

"Today, Sandia's technical library is comparable — in terms of its staff, functions, and range of collection — to similar organizations at Bell Telephone Laboratories or Los Alamos Scientific Laboratory," Mr. Parman explains.

In October 1961, the unclassified library was transferred from Bldg. 802 to Bldg. 804. This move enabled the library to improve its services, enlarge its collection, and provide more reading room space and study carrels for the use of its patrons. It also helped, along with the transfer of classified functions in 1959, to make possible the integration of classified and unclassified ordering, receival, storage, and reference.

"We're currently setting up a collection of Sandia Corporation Reports to be used for reference," Mr. Parman reports. The unclassified part of the collection, which is not yet complete, will be available for reference in Bldg. 804. A proposal for an addition to Bldg. 804 to house the entire report collection, both internal and external, and a secured reading room, has been made to the AEC.

Classification Work

The function of Classification Division 3422, supervised by J. G. Marsh, includes consultation and review of material, written classification guidance, education, classification evaluation, staff support to the Sandia Classification Board, supplier liaison, and review of material for publication. The function of the division is vital to the protection of the classified interests of Sandia Corporation.

Classification Division 3422 is responsible for maintaining a difficult balance between protecting classified information and not over-controlling research information, of benefit to the scientific public, which is generated at Sandia.

In a broad sense, the responsibility of 3422 is to assure uniform observance of AEC classification guidelines within the Corporation and by its subcontractors. In recent years, the scope of this responsibility has been expanding, but perhaps more importantly, the understanding of classification and acceptance of the need for it appear to have improved. People are becoming aware of the Division's desire to help; more of them are seeking classification advice and help early in the development of their projects.

Technical Information Division 3423, supervised by W. F. Carstens, provides a host of services involving the editing and publishing of technical information. Some of these functions are carried out on an assignment basis; some are provided on request.

In addition to providing reports for management on an assigned basis, 3423 provides writing and editing services upon request. Specifically, Division 3423 participates, in varying degree, in the publication of from 1000 to 1200 reports yearly, including the Sandia Corporation Monthly, Quarterly, and Annual Report; Sandia Corporation Reports (SCs and SCDRs); Reprints (SCRs); and minutes of technical meetings.

Division 3423 reviews the technical information generated at Sandia for internal and external use. By publishing technical information of consistantly high quality, 3423 enables the scientific public to see Sandia Corporation as it is. Such a strengthening of the "corporate image" probably produces beneficial effects in such areas as technical recruiting.

In addition to providing for preparation, publication, and classification of technical information, Department 3420 also provides administrative staff support through the assignment of administrative assistants to vice presidents and directors, and in a few instances, to the department level.

Administrative Assistants

Three Administrative Assistant Division supervisors, D. M. McKnight (3424), L. C. Guynes (3425), and B. W. Scott (3426) are engaged in providing and supervising this support, which relieves line management of certain administrative duties in plant and expense budgeting, cost analysis and control, personnel actions, employment, performance reviews, space planning and modifications, technical program planning and control, and office management.

The Administrative Assistant function provides an interesting

(Continued on Page Four)

W. E. President Gives Challenge to U. S. Scientists And Engineers

Being best and staying best in the face of the economic and military competition that confronts this nation depends on the competence and creativity of our scientists and engineers and the effectiveness with which they are employed, H. I. Romnes, President of Western Electric Co., told the Annual Convention of the Armed Forces Communication and Electronics Association.

Mr. Romnes gave the keynote address at AFCEA's convention in Washington. During the convention, Indianapolis Works Manager Walter H. Pagenkopf was elected president of the association. Mr. Pagenkopf was formerly Superintendent of the Development Shops at Sandia Corporation. He was assigned to Sandia from November 1949 to November 1951.

In his talk Mr. Romnes pointed out that the technical programs to which the U.S. is committed—to strengthen its defenses, improve its economy and achieve its goals in space—must largely be accomplished with its current complement of technical manpower.

"The question, then," he said, "is how can we use what we have better. The answer lies in the kind of opportunities we provide for our professional people, the support we give them and the efficiency with which we use them."

Raising a question whether "research and development work may have become such a mysterious and somehow sacred realm that managers, however aggressive they may be in other aspects of business, feel themselves incompetent to question how it is administered," he advised managers to "dig in, ask questions . . . demand demonstrable evidence of the return on their investment just as they do with their investment in physical plant."

Pointing out that "competent engineering and scientific manpower is not a quickly expandable resource," Mr. Romnes urged that government contractors adopt the "self discipline required to limit the jobs we seek to the technical manpower skills we have or can reasonably assimilate . . . growing too fast hampers efficiency, degrades performance."

"A continuing inventory" of technical talent was suggested by Mr. Romnes. With such a system, he said, "all of us in industry and government who participate in the widely dispersed process of decision-making would be in a position to determine . . how much we can undertake, how far we can go and how fast."

Expressing concern that the "mix" of trained technical manpower being obtained from colleges may not match the needs of industry, Mr. Romnes said technical education today has taken a broader, more "scientitic" approach which blurs the line between science and engineering and leaves it to industry to bridge the gap between principle and specific application.

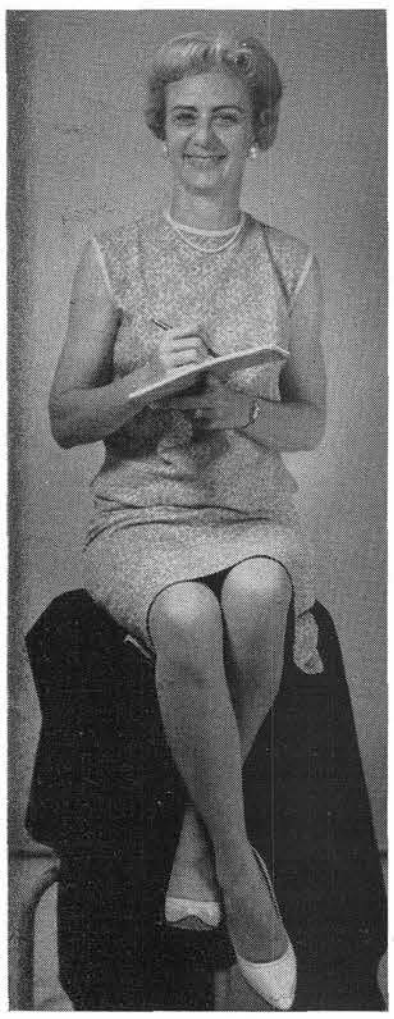
"My concern," he said, "is that somehow science has been made to appear a higher order of the priesthood and that as a consequence a good many young people may be pointed away from areas of engineering application where their talents—and a large proportion of our needs—really lie.

"The application of the more prestigious word 'science' to what is really engineering hasn't helped," he said, and he pointed out that "the successful launching of a satellite is held as a 'scientific achievement' while failures are ascribed to 'engineering difficulties . . .'

"These semantic lapses aren't serious in themselves, but I can't help but feel that right now they are influencing thousands of young people in the choice of their careers and the selection of their studies."

K. E. Sutton to Be Speaker at AMA Recruiting Seminar

K. E. Sutton, supervisor of Sandia's Employment Division 3151, will journey to New York City to participate in an American Management Association Orientation Seminar on Recruiting Engineers and Scientists, Aug. 19-21. The seminar will be held in the Hotel Astor.



—Evelyn McCoy—

Take a Memo, Please

Wear a hat for protection when working for long periods in the hot summer sun.

Food for Thought— Booklet Discusses Food for Hungry

The world's population is growing larger and hungrier. One-half to two-thirds of the world's people struggle to obtain food. Meanwhile, two million babies are born each week, thus intensifying the hunger problem.

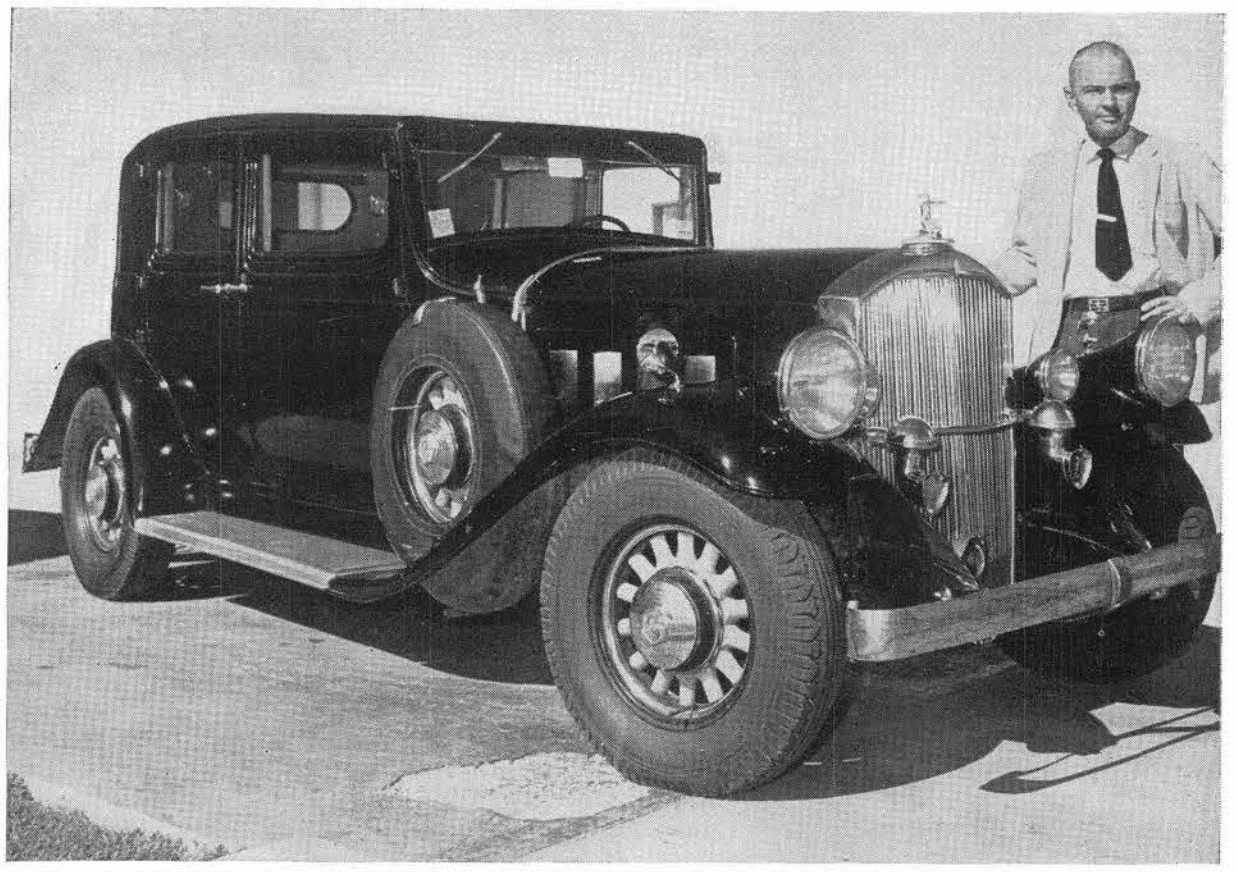
Some solutions to the problem are being found today, however, by the UN Food and Agriculture Organization (UNFAO). These solutions, and a description of the food problem, will be outlined in a booklet due to appear in the racks Aug. 6. The booklet, "Teach A Man To Fish — Hope For the World's Hungry," was prepared especially for Western Electric Company by Carl Bakal, an authority on the food problem, in cooperation with the UNFAO's "Freedom From Hunger Campaign."

The booklet offers solutions with dignity for the individual. It proposes that the world's hungry be taken off the demoralizing international breadline by teaching them to feed themselves.

AEC Lets Contract For Dormitories at NTS Camp Mercury

Ralph Engelstad Construction Company of Las Vegas, Nev., has been awarded a contract for construction of 10 buildings at Mercury, base camp for the Nevada Test Site. The project includes eight dormitories and two units which will house lounges, storage, and mechanical rooms. The Engelstad bid of $538,092 was determined to be the most favorable of the four responsive bids received.

The dormitories are part of a $6,000,000 program of permanent construction at Mercury. They will be one-story, air conditioned structures. Each will have 12 bedrooms, with connecting baths for each two rooms.



1932 PIERCE-ARROW is currently being restored to mint condition by owner Jack Shoup (1430). Major difficulty is locating authentic parts and a factory service manual. Jack has worked on the car 18 months.

Coronado Club Members to Elect Directors Aug. 3

Members of the Coronado Club will elect six new members to the board of directors at an annual meeting Aug. 5 at 8 p.m. in the Club ballroom.

Proposed new members include R. E. Hepplewhite (4430); Max M. Newsom (1532-2); Charles O'Keefe (3126); George D. Horne, Jr. (3455); Peter Creagh, AEC; and Fred Bogott, ACF Industries.

All of the members who are registered as of 8 p.m. at the meeting will constitute a quorum. Refreshments will be served.

Club Announces Events Scheduled For Next Month

Coronado Club events for the first part of August include a regular buffet and social hour this evening, and a chicken buffet and social hour Aug. 9.

On Aug. 10, the Club will feature a Juke Box Saturday Night, with dancing from 9 p.m. to 1 a.m. The dance will be free for members and their guests, and social hour prices will prevail for the evening

The Club's Dollar Night on Aug. 14 will feature martinis and hors d'oeuvres.

Promotions

Martha V. Martinez (4623) to Record Clerk
Emmalyn L. Massey (3427) to Document Clerk
Marie A. Dremalas (8232) to Document Clark
M. Jolene Stillwell (3463) to Chartist
Leeland H. Hogue (1433) to Staff Member—Technical
John L. Miller (4341) to Staff Member—Administrative
Ilse B. Hurt (2563) to Staff Assistant—Technical
Coralyn K. McGregor (8233) to Staff Associate—Administrative
V. R. Mendenhall (8233) to Staff Associate—Administrative
Jose P. Sanchez (4614) to Utility Operator
Marion A. Williams (4518) to Maintenance Man
J. Joe Martinez (3427) to Messenger
Rachel C. Jackson (3126) to Secretarial Stenographer
Peggy L. Wheeler (3126) to Secretarial Stenographer
C. W. Heidrich (3126) to Secretarial Stenographer
Sallie A. Bailey (3421) to Library Assistant
Catherine Tinsmith (3452) to Data Processing Clerk
Bernie Vallejos (4432) to Microreproduction Equipment Operator
Gregory M. Silva (4432) to Microreproduction Equipment Operator
Billie L. Beckman (3427) to Schedule Clerk
B. J. Redenbaugh (8212) to Service Clerk
Elton C. Mederios (8232) to Document Clerk
Emily A. Joiner (8212) to Employment Clerk
Marie J. Brenton (8114) to Service Clerk
Virginia I. Mohr (8212) to Personnel Clerk
Robert A. Joseph (8232) to Camera Operator
Margaret A. Zumwalt (8233) to Editorial Assistant
Robert E. Crow (8241) to Staff Member—Administrative
Emma Jane Moon (8232) to Production Release Clerk
Edith F. Milatzo (8000) to Secretary
Barbara N. Rush (7000) to Secretary
Millicent C. Hulgan (4431) to Typist
Hilda Cruz (4431) to Typist
D. P. Kerstetter (2563) to Data Reduction Clerk
Ralph D. Lovvorn (3465) to Photographic Printer
Donald J. Papineau (3465) to Photographic Printer
Lillian K. Funk (8161) to Service Clerk
Melba Fitzgerald (8232) to Service Clerk
Lorena C. Schneider (8233) to Editorial Assistant

Supervisory Lateral Transfers

C. N. Giles from 7312 to 7334
J. B. Patrick, Jr. from 7312-1 to 7334-1
J. H. Harrell, Jr. from 7312-2 to 7334-2
A. B. Anderson from 7311-3 to 7334-3
A. H. Perry from 3462-2 to 4432-2
J. P. Shurter from 4151-1 to 4352-2
J. T. Dempsey from 4153-1 to 4151-1
W. R. Barton from 7421-2 to 7424-2
S. McAlees from 7424-2 to 7421-2
J. Stein from 1314-2 to 1312-1
A. F. Beck from 1313-2 to 1314-2
K. H. Lloyd from assignment in 4410 to 4421-1
G. R. Bachand from assignment in 5420 to 1421

It Takes You Back to That Year FDR Was First Elected

"You might say it drives like a sport-truck," Jack Shoup (1430) says about his 1932 Pierce-Arrow. Jack has been restoring the 5000-lb. touring car for the past year and one-half. It is approaching mint condition.

"I plan to restore it as authentically as possible," Jack said. "But parts are a problem and it does take a lot of time." Jack purchased the car from a school teacher in Colorado Springs. It was in running condition at the time and had previously had a complete re-upholstering job.

"I drove it to Albuquerque at about 55 miles per hour and averaged 17 miles per gallon," Jack said. "That's pretty good for the 125 hp straight eight engine. I did have to stop occasionally to put water in the radiator."

Since he's had the car, Jack has reworked the ignition, overhauled the shock absorbers, cleaned up the undercarriage, and made other mechanical repairs.

He's currently working on the shocks and radiator and plans further chassis work and re-wiring. He's looking for a Pierce-Arrow factory service manual and authentic Pierce-Arrow parts.

"I learned to drive in a Pierce-Arrow," he said, "and I've always had a soft spot for the old cars. In addition to the fun of driving it, I enjoy working on it. It's a great hobby."

BUSINESS WOMAN OF THE YEAR award, sponsored by the Albuquerque Charter Chapter, American Business Women's Association, was presented to Mrs. Emily Gilmore (3453), left, by Mrs. C. J. Blasek (4131) at a meeting of the Chapter, July 17. Mrs. Gilmore, who's president of the Charter Chapter, is now a candidate for the National Business Woman of the Year award, and plans to attend the Association's national convention to be held Oct. 18-20 in Cleveland, O.

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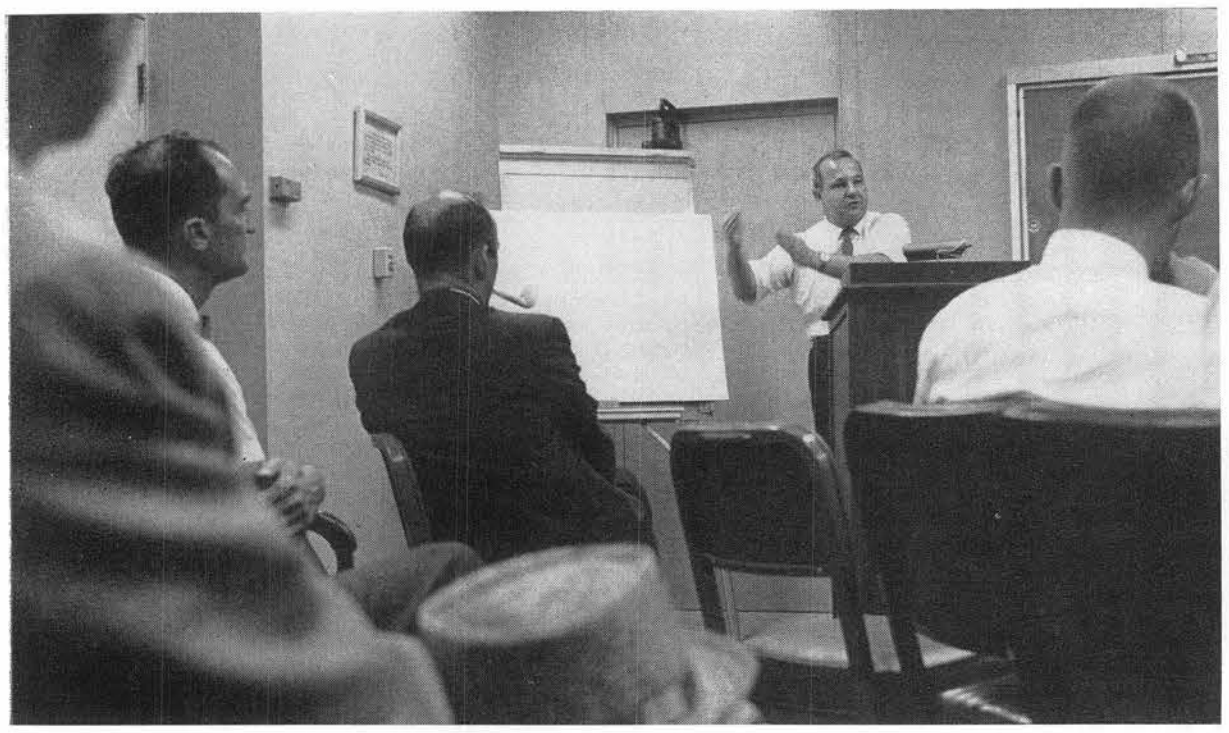


VISITING SANDIA LABORATORY last week was Richard A. Dudek, Chairman, Department of Industrial Engineering, Texas Technological College. He discussed industrial engineering activities with Sandia engineers, members of the American Institute of Industrial Engineers, and University of New Mexico representatives.

Congenital Heart Defect Victims Usually Restored to Good Health

by S. P. Bliss, M.D.
Sandia Corporation Medical Director

A congenital heart defect is one which is present at birth, although it may not be discovered until later in life. It is estimated that 30,000-40,000 children are born with heart defects in this country each year.

An inborn heart defect occurs when the heart, or a major blood vessel near the heart, has failed to mature normally during the period of growth before a child is born. Researchers are trying to find out what causes the abnormal development.

Inborn defects may be mild or serious. When they are mild, they may never cause any trouble; but when defects are serious, they interfere with circulation of the blood, slow the patient's growth, and reduce his energy.

In recent years there has been dramatic progress in diagnosis, surgery, and medical care for congenital heart defects, and today most patients with this type of heart ailment can be restored to normal or near-normal health.

Sandia Naval Reserve Officer Hands Unit Command to Another Sandian

In a change of command ceremony July 11, Lieutenant Commander Henry M. Willis (he's also Manager of Security Standards and Operations Department 3240) assumed command of Surface Division 8-106(M), U. S. Naval Reserve from Lieutenant Commander John L. Wheeler (he's a Recruiting Coordinator of Employment Division 3151). The ceremony took place at the U. S. Navy and Marine Reserve Training Center.

Division 8-106(M) was ranked first among the 34 units in this Naval District in 1962; it ranked third in the nation among 234 units. As of June 1963, it again ranked first in the District.

Commander Willis received his commission in the Naval Reserve through the UNM ROTC in 1945, and was sent to the Pacific as engineering officer aboard the USS PC-1243.

Hank served in Division 8-106 (M) from 1949-1950. He was one of the officers who commissioned the only special weapons unit in the country in 1951: Volunteer Ordnance Unit 8-11 (Special Weapons). He served as a member of the unit for twelve and a half years, and also was its commander. He began his Sandia career in July 1949.

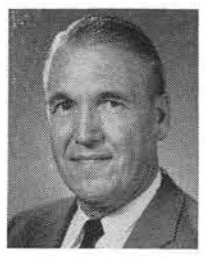
Commander Wheeler began his naval career in September 1942 as an enlisted man. He entered active duty in March 1943, and served as a radioman aboard PT boats in the Pacific until February 1946. After his discharge from active duty, he enrolled at the University of New Mexico and joined Naval Reserve Surface Division 8-106(M) in September 1946.

John was commissioned in August 1948, and was recalled to active duty in October 1950. He served the next two years aboard an attack transport in the Mediterranean. He rejoined Division 8-106(M) in December 1952 and assumed command of the organization in July 1961. He has been with Sandia Corporation since May 1953.

FORMER COMMANDER of Surface Division 8-106(M), U. S. Naval Reserve, Lt. Cmdr. J. L. Wheeler (3151-2), left, congratulates the incoming commander, Lt. Cmdr. H. M. Willis (3240). Change of command took place July 11 at U. S. Naval Reserve Training Center, Albuquerque.

Clyde I. Millard Plans Retirement Visit To Mexican Island

Clyde I. Millard retired this week from Sandia Laboratory. He joined Sandia April 1, 1953, as a mechanical engineer and worked in the Materials, Standards, and Manufacturing Development areas.



He was a professor of industrial engineering at Cornell University for 25 years prior to joining Sandia.

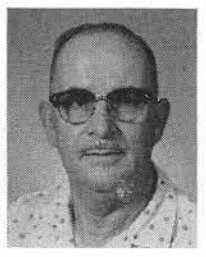
"There are many things I plan to do," Clyde said. "I'll travel back East, go fishing in the mountains, look after some property, and perhaps take a trip to Cozumel, an island off the coast of Yucatan, Mexico."

The Millards will continue to reside at 8507 Flower Place NE in Albuquerque. His son, 19, lives at home and his married daughter and one grandson live in Albuquerque.

"I've heard Cozumel is a paradise for retired people—ideal fishing, moderate climate. Living is easy and inexpensive," Clyde said.

R. W. Sheppard Retires Today; To Live in State

Russell W. Sheppard retired this week after 10 years at Sandia Laboratory. Since joining the Corporation in August 1953, Russell has been a stockkeeper, the past three years as a high explosives stockkeeper in Explosives and Material Handling Division 4614.



An immediate trip to Michigan is part of his retirement plans. He will visit his three daughters and son who live in Michigan and also attend a family reunion there when Mrs. Sheppard's parents observe their 60th wedding anniversary in September.

When he returns to New Mexico, Russell will settle in Reserve where he plans to engage in carpentry work and do a lot of hunting. "I have good friends in Reserve and the wilderness areas around there are great for deer," he said.

Sympathy

To George H. Lester (4514-2) for the death of his father in Indiana, July 20.

To Woodrow O. Lerke (4514-2) for the death of his brother in Truth or Consequences, July 21.

To Wilma Ash (4171) for the death of her sister in Decatur, Ill., July 17.

The Privilege of Service

Jane Addams Urged Action As Expression for Ethics

The sole medium of expression for ethics, Jane Addams maintained, is action. "A situation does not really become moral until we are confronted with the question of what shall be done in a concrete case," she said.

Jane Addams founded Hull House in the slums of Chicago in 1889, an institution that became the prototype of rehabilitation, education, and recreation centers in poverty-stricken neighborhoods. She devoted her life to "humanitarian service" which included social reform through legislation, equal rights for women, labor unions for women, and international peace movements.

"The modern world is developing an almost mystic consciousness of continuity and interdependence of mankind," she wrote. "It lies with us who are here now to make this consciousness — as yet so fleeting and uncertain — the unique contribution of our time to that small handful of incentives which really motivate human conduct.

"A man's primary allegiance is to his vision of the truth," she said. "He is under obligation to affirm it."

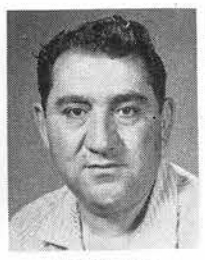
* * *

Affirm those things in which you believe, affirm human dignity. Next fall, when the Employees' Contribution Plan conducts its once-a-year drive for funds, increase your gift to these ECP agencies which continue with Jane Addams' "humanitarian service." It's a small thing to make a payroll deduction for ECP, but it is part of our unique contribution to our time.

Service Awards

15 Years

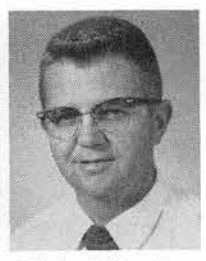
R. J. Hansen
4200
Aug. 3, 1948



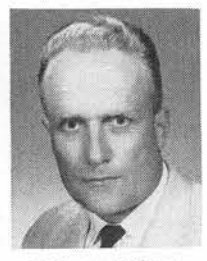
Paul A. Silva
4614
Aug. 3, 1948

James R. Craig
Aug. 4, 1948
1312

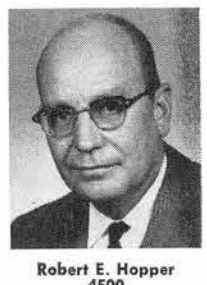
James W. Pinkerton
4232
Aug. 4, 1948



Charles M. Grassham
7332
Aug. 4, 1948

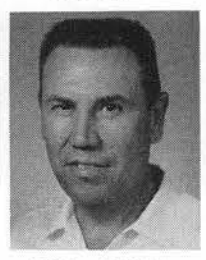


Luther J. Heilman
2600
Aug. 5, 1948



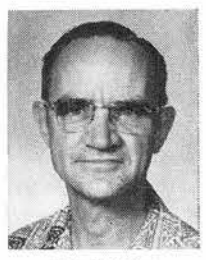
Robert E. Hopper
4500
Aug. 5, 1948

William J. Cocke
1513
Aug. 6, 1948

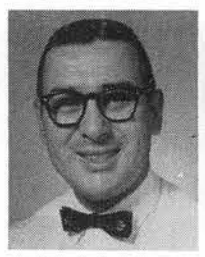


William E. Holder
7254
Aug. 9, 1948

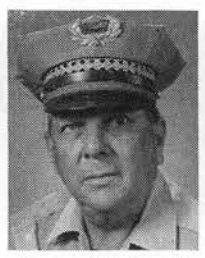
Ilva R. Baldwin
3126
Aug. 10, 1948



John E. Shine
4253
Aug. 10, 1948



Leo P. Apodaca
2641
Aug. 11, 1948



Raymond N. Arnold
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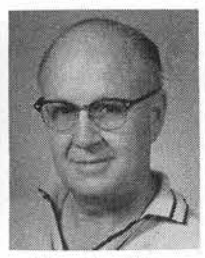
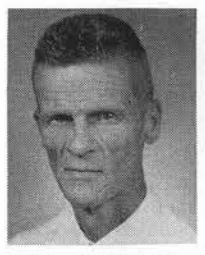
Aug. 11, 1948

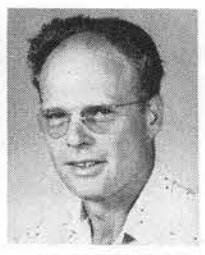


Robert M. Officer
4541
Aug. 11, 1948

Joe Chavez
4573
Aug. 11, 1948



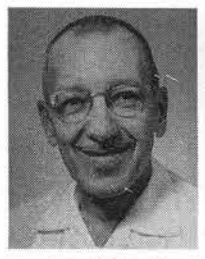
James W. Hook, Jr.
4110
Aug. 12, 1948



Louis H. White
4573
Aug. 12, 1948

Ruth J. Shoup
2323
Aug. 16, 1948

W. A. Rinehart
2625
Aug. 16, 1948



Jack M. Merrill
7434
Aug. 16, 1948

Marion E. Schifani
3126
Aug. 16, 1948

10 Years

Russell W. Sheppard 4614, Milton D. Meek 4624, Gerald L. Lancaster 7536, Pancrasio Gonzales 4574, Joseph H. Placek 2452, R. D. Freyermuth 4315, Josephine B. Hanna 2630, Carlos Jaramillo 4574, Alva L. Ayers 4252, Merril J. Robinson 1414.

Continued from Page One

Information -- That's the Business of 3400

DISCUSSING PREPARATION of library work sheet, versatile cataloging tool, are Mrs. B. R. Allen, supervisor of Library Section 3421-1 (left), and Mrs. I. M. Gutierrez (3421-1). The form, an enlarged version of which is shown in the background, is an input device to a computer-controlled system under which some 4,000 items are cataloged.

PREPARATION of reports often takes the technical writer afield to discuss work with technical personnel. Lou Baldwin of Publications Section 3423-1 (left) discusses some of the techniques of testing performed at Area III ramp facility with facility engineer Joe Ogurchak (7325-2).

SPHERE OF SCIENCE offers the visitor to Sandia Laboratory a comprehensive look at some of the unclassified aspects of the work being done at Sandia. Examining a radiosonde, being used in a Sphere display, are (l to r) B. E. Dieruf, Mrs. S. M. Rappleyea (both 3433-1), and D. E. Irvin, supervisor of Division 3433.

and broadening assignment for the personnel engaged in it. Although its function is not one of training as such, it nevertheless provides a comprehensive area f or management and administrative indoctrination.

Information Distribution

Information Distribution Division 3427, supervised by J. L. Fife, is responsible for "keeping track" of the information in movement at Sandia Laboratory. "We see to it that information goes where it's supposed to go," Mr. Fife comments, "and especially that classified information is accounted for."

Classified Information Records Section maintains control accountability records, and maintains inventories of classified information; Mail Services Section provides Sandia Laboratory with mail and messenger services; and Information Distribution Section handles distribution of the classified reports generated at Sandia, and keeps records on all of the classified material going out of the Laboratory.

Records Management

The records management program of Sandia Laboratory is administered by Records Management Division 3428, supervised by A. E. Jones. The enormous amount of paperwork produced at Sandia must be retained, stored, and disposed of in a systematic manner, and the task of Division 3428 is to implement such retention, storage, and disposal, and to advise on record generation and distribution.

The Division administers a program for control, improvement, and simplification of records activities, participates in the review of the Company's supply and use of filing and record-keeping equipment, and coordinates procedures intended to protect vital records in case of emergency.

Division responsibilities also include the Communications Center at Sandia. This Center enables Sandia to communicate quickly, via Teletype or telephone with the "outside" world, including a number of other AEC contractors or subcontractors. It also provides for the accountability of messages received or sent on its facilities.

Public Relations

Public Relations and Employee Publications Department 3430 is managed by J. W. Galbreath. The Department is responsible for the maintenance of favorable relations for Sandia with the community, various agencies of the government, schools, and the employees; for dissemination of unclassified information of general public interest; for acquisition of public recognition for Sandia Corporation and its employees for noteworthy activities; for assistance to the Corporation in its recruiting activities; and for the function of the employee communications program.

"We're concerned with information with reference to the public at large," Mr. Galbreath points out. "Sandia Corporation is an important part of the community; its associations with the public are extensive and continuous. We realize the necessity of good communications in fostering a favorable image of the Company with these groups and organizations."

Public Information Division 3431, supervised by T. B. Sherwin, serves to strengthen the public's understanding of, and recognition for, Sandia Corporation and its role in the Atomic Energy program through local, regional, and national news media, including radio, television, newspapers, and magazines.

"The Division is a contact point for representatives of the various news media and Sandia," Mr. Sherwin points out. "Specifically, we prepare releases, answer inquiries and provide background information, photographs, and other material they need for specific articles. In addition, we arrange press tours or conferences as needed to make major news announcements."

Division 3431 also arranges for the production of short motion pictures describing certain technical activities of Sandia which are releasable to the public, and also arranges for film clips of news or feature material for television release.

An additional responsibility involves review of non-technical information originating outside the Division and destined for public release. One of 3431's important activities is the Speakers' Bureau, through which arrangements are made for representatives of the Corporation to speak on a variety of official and semi-official subjects to outside groups such as service clubs, schools, professional societies, and special interest groups. Division 3431 helps speakers gather information for their speeches, secures necessary approvals, and arranges details with the requesting organization. Visual aid material is sometimes provided.

Some 7900 members of the general public are also employees of Sandia Corporation; Employee Publications Division 3432 has the responsibility of keeping them informed, not only about the work of Sandia, but also about happenings outside the Company which have a bearing on their lives as employees, as citizens, and as individuals.

Division 3432 is supervised by R. S. Gillespie. "Our program of internal communications includes several publications and a number of services," he comments. "We write, edit, and publish the Sandia Corporation **Lab News**, an informal bi-weekly journal that serves a two-way communications purpose."

The **Lab News** serves the Company by acting as a vehicle for management and administrative information to be disseminated to the employees; it serves the employees by disseminating information to them about each other.

Sandia Lab News

"The **Lab News** is designed to give the individual employee a better understanding of his job, his job environment, and the people he works with," Mr. Gillespie explains. In addition, Division 3432 publishes two other news media with somewhat more specialized purposes: Management News Briefs and Employee Bulletins. These are published on a demand basis; they're designed to provide a fast, concise means to disseminate information of interest primarily to management — via Management News Briefs — and administrative information of interest to all employees — via Employee Bulletins.

Another function of Division 3432 is writing, editing, and arranging publication of special-purpose booklets such as recruiting brochures, employee handbooks, and educational catalogs for both Sandia and Livermore Laboratories.

Other responsibilities involve coordination and maintenance of a booklet rack program — through which booklets on a variety of topics and of general interest are distributed to employees; coordination and service of all the official and unofficial bulletin boards at Sandia Laboratory; and publication of special announcements such as the Sandia Laboratory Technical Calendar.

In addition to these services, Division 3432 provides photography for all of the public information and public relations activities at Sandia, a task involving not only photography and photographic processing, but also maintenance of a library of more than 14,000 negatives of releasable photographs.

Community Relations

Community Relations Division 3433, supervised by D. E. Irvin, provides services both inside and outside the Company. "In a sense, the two areas — internal and external services — are inter-related," Mr. Irvin says. "Since Sandia is integrally a part of the larger community of Albuquerque, the internal services we provide are inevitably reflected among the public at large; our external activities, such as our involvement with the Chamber of Commerce or the United Community Fund, inevitably have some effect on Sandia employees."

Division 3433 coordinates tours, enabling visitors to Sandia to see not only the Sphere of Science exhibits and such associated films as the "Sandia Story," but also laboratory facilities, support facilities such as the 7090 Computer, test facilities such as those found in Sandia's Area III, and facilities of special interest to the visitors.

A second major internal function of the Division involves coordination and publicity for the annual Employees' Contribution Plan fund drive. "Preparation for the drive usually begins sometime in May," Mr. Irvin reports. "Our support continues until final statistics of the drive are prepared."

Careers in Science

Division 3433 encourages careers in science through a program which includes participation and display in Science Fair activities on a local, state, and regional level; and in Edison Day activities. Also, 3433 provides exhibit support for technical groups, at community programs, at various military activities, and at special displays and exhibits such as those at the Roswell Museum.

The displays and exhibits are intended to give the general public a clear picture of some of the scientific and technological activities conducted by Sandia Corporation.

EDP Department 3450

Sandia's research and development activities, coupled with redesign, modification, and retrofit responsibilities, quality, and countless other technical undertakings, generate enormous amounts of data. This information must be processed, stored, and retrieved with speed, precision, and economy. Electronic Data Processing Department 3450, managed by F. H. Grubbs, performs these services at Sandia Laboratory.

"Department 3450 is continually examining and adopting improved means for the handling of information both to increase the speed of processing and to improve the accuracy of the results," Mr. Grubbs notes. However, he points out, "automation" as such is not, in itself, a goal. Although the Department uses high speed computers and other data processing equipment, operated by skilled personnel on an around the clock basis, the key to the organization is the Staff Member who performs the systems analysis work.

Department 3450 is charged with the systems analysis responsibility for computer based and computer oriented technical and administrative systems. This is in addition to the complex, but secondary, activity of actual computer programming which brings a given assignment to a successful completion.

"We realize our greatest degree of satisfaction," Mr. Grubbs says, "in working jointly with other organizations in the design, development, and implementation of a system proposal, knowing that our equipment and supporting staff will continue to serve that organization on a day-to-day basis."

EDP Studies

According to G. D. Horne, Jr., supervisor of Programming Division II, 3455, the success of all electronic data processing studies is, like any other system study, dependent on a precise and detailed definition of the job specifications. The end result desired by management, the method of processing to achieve this result, and the information sources, form, and content which are to be entered in the processing, must all be described in the most minute detail.

This is an exacting and time consuming process and this analysis work, done jointly with the involved departments, may take considerable time, even though the actual computer programming may subsequently be done in a relatively short time.

Data Center Operations

"Our department presently performs more than 100 separate but regularly scheduled data processing jobs," comments L. E. Mahuron, supervisor of Data Center Division 3452. "The largest, and, we feel, most valuable to the Company, is the maintenance of the Data Center File. This is a collection of data from AEC contractors producing and testing weapons and weapon components and from weapon storage sites."

Information for any weapon program that has been introduced into the system can be retrieved and analyzed in almost limitless ways. For example, it is possible through the Record of Assembly file to determine all the components of a given weapon by serial number; or in reverse, knowing the serial numbers of some components, one can find the weapon on which those components are installed.

Department 3450 processes much of the quality data received by Quality Assurance 7500, and provides programming for the automatic reduction of this data for systematic presentation.

The Department also provides its services to technical organizations who wish to run special programs of their own design. It also serves as a consultant to those organizations in instances where such service is requested.

It provides its services to administrative organizations as well as to technical organizations, performing various accounting and financial computations on both scheduled and request bases.

To provide these services on a timely basis, Operations Division 3452 uses an IBM 7090 computer, supported by several IBM 1400 series units. These units feed information to the 7090 and also interpret and publish the results of 7090 processing.

Changing Business

C. E. Katzenburger, Division supervisor of 3452, points out that this is a changing business.

"The data processing and computer field is constantly changing. In a few years, we may be using entirely different equipment, but currently, the 7090 is the best tool available for covering the broad band of technical and administrative operations we perform," he said.

In addition to operating computing equipment, the Operations Division furnishes mechanical, clerical, and administrative services to the balance of the Department on a seven-day, twenty-four-hours-a-day basis.

The Department's concern with investigating advanced data research and computing techniques has enabled it to reduce its running time on many programs.

It is also investigating and developing new forms of computer language and new techniques for using them. APT (Automatically Programmed Tools) and SPLIT (Sundstrand Programming Language Internally Translated) are two forms of language for use with programmed milling techniques. Both are currently a matter of 3450's concern. Personnel of the Advanced Devleopment Division have developed a Weighted Regression Analysis Program (WRAP) which puts the 7090 Computer to use in an advanced method for regression analysis. This program is now being widely used by other industries throughout the country.

SYSTEMS ANALYSIS is a vital part of the job performed by Electronic Data Processing Department 3450. Here, A. E. Garratt of Advanced Development Division 3454 examines print-out of a test program for Sandia's 7090 computer. 3450 performs a variety of data jobs.

PREPARATION of films is one of the tasks performed by Industrial Photographics Division 3465. Here, a group of Sandians shoots footage for a forthcoming security film, "Moonrace," produced for the AEC. (l to r) G. R. Osborn, M. W. Hancock (both 3465-1); Bill Sexton, Radio Station KDEF, who plays a part in the film; W. P. Mahaffey, and R. V. Foster (both 3465-1). Division 3465 also provides still photographic support.

Advanced Computer Development

Department 3450 is working in the area of computer systems programming to increase the speed of many programs. Another investigation of interest will improve the 7090 Computer's ability essentially to schedule and operate itself.

"While we continue our use of these newer techniques, and update systems already in operation in our Advanced Development Division," says D. K. Robbins, 3454, "the major part of our efforts continues to be the broad-based systems studies. These result from management's requests for expanded electronic data processing services."

He was joined in his comments by R. M. Allan, supervisor of Programming Division I, 3451, who adds, "Our objective is to permit our systems analysis to continue searching and appraising the technical and administrative operation of the Company. Then we propose the adoption of electronic data processing systems which are of significant advantage in the furtherance of the Company's goals."

Graphic Arts

Graphic Arts Department 3460, managed by H. W. Maglidt, provides a number of non-verbal communications services to the entire Corporation. "Our services are provided in three major areas," Mr. Maglidt points out. "Reproduction Division 3462 is supervised by J. W. Hayes; Technical Art Division 3463 is supervised by W. W. Ives; and Industrial Photographics Division 3465 is supervised by J. J. Michnovicz."

"Graphic Arts," as the term is used today, includes illustration, typography, photography, reproduction, the design of visual materials, and other visual communication techniques. At Sandia, these services — available through Department 3460— have been developed primarily to meet the requirements of a research and development organization.

Reproduction

The function of Reproduction Division 3462 is twofold. First, 3462 provides, through either in-plant or outside sources, for printing and reproduction functions to meet the Company's requirements. "Our in-plant facilities," Mr. Hayes explains, "comprise a print shop, a bindery, and various copying processes. These, along with their associated equipment, are capable of serving many needs, especially those generated in the areas of research and development."

Division 3462 also provides a graphic arts consultation and programming service. This group comprises personnel experienced in reproduction, art, and photographics. Their purpose is to centralize and simplify requesting procedures, to coordinate work within and between the Graphic Arts Divisions, and to provide recommendations and weed out problems which may cause delay and unnecessary expenditure.

Technical Art

Technical Art Division 3463 is organized, staffed, and equipped to provide technical art and graphic design services for Sandia. "These requirements," Mr. Ives points out, "are of four types: illustration for research and engineering publications, for military publications, for technical publications, and for general illustration and graphic design presentations."

The technical artist uses a range of techniques in fulfilling these requirements. On the one hand is a relatively simple technique like line drawing, say a simple black and white rendition of an individual object. On the other is a relatively complex and painstaking rendition, like a full-color illustration showing the inter-relation and function of several parts of a mechanism. In between is a range of such media as colored pencil, wash drawing, ink, pastel, water color, and tempera, used in a variety of techniques such as an artist's concept in perspective, perspective cutaway, exploded view, block diagram, schematic, and diagrammatic.

The technical artist can combine media with techniques in many ways. "As a general principle, our work is carried out to communicate ideas visually, often in ways impossible to achieve by any other means," Mr. Ives points out.

The work of Division 3463 is handled by Technical Illustration Section 3463-1, Technical Report Illustration and Presentation Art Section 3463-2, and Commercial and Animation Art Section 3463-3. The personnel of Division 3463, working as a team, are organized and trained to meet almost any conceivable artwork requirement.

Industrial Photographics

Industrial Photographics Division 3465 provides research and industrial photographic services for Sandia Laboratory. "Film in its various forms is constantly finding new uses," Mr. Michnovicz commented. "When properly used, it can be an effective diagnostic and communications tool for research, engineering, and management. At Sandia, photographic requirements are fulfilled by motion picture and audio-visual services, film laboratory engineering and processing services, and still photographic services.

Division 3465 produces motion picture films for research and engineering film reports, weapon program historical reports, employee and military training, and for public relations purposes. "Few people would question motion picture film's value for scientific observation and recording;" Mr. Michnovicz continues, "however, to be effective as a communications tool, the motion picture medium must be considered in other lights. It's a matter, first, of deciding if use of the motion picture medium is warranted, and then of planning, of determining the purpose of the film, what is to be communicated and to whom, and then incorporating these guidelines into the finished product.

Also, 3465 provides a comprehensive technical and industrial still photography service to organizations requesting it. Photographers are assigned, on 24 hours advance notice, to photograph anything in the immediate area relating to the work of Sandia Corporation. Where demand at a particular site or project is great, photographers may be assigned there semi-permanently. For specialized requirements, a range of specialized equipment and skills is available.

A third function of 3465 involves developing and printing of the film exposed by the still- and motion-picture photographers, plus the scientific film records generated in research and development projects. Here, too, a wide range of advanced equipment and training enables technicians to handle nearly any requirement.

Functions Diversified

"The foregoing touches on some of the highlights of the 3400 operation," Mr. Smith says. "As you can see, the functions are broad and quite diversified, but all are aimed at providing the best possible service, using all available tools, in the handling of information — Sandia Corporation's product."

Flag Football Is Fast, Competitive; Strict Rules Make Game Safe, Sane

For some 250 Sandians, the month of August means thoughts about the football season which starts in a few weeks. At Sandia Laboratory, it's flag football, which retains all the competitiveness of the tackling variety but results in less wear and tear on the players.

Officers of the Sandia Laboratory Employees Flag Football Association will be elected next week. Six or more teams will be formed with members from a combination of two or more Sandia general organizations.

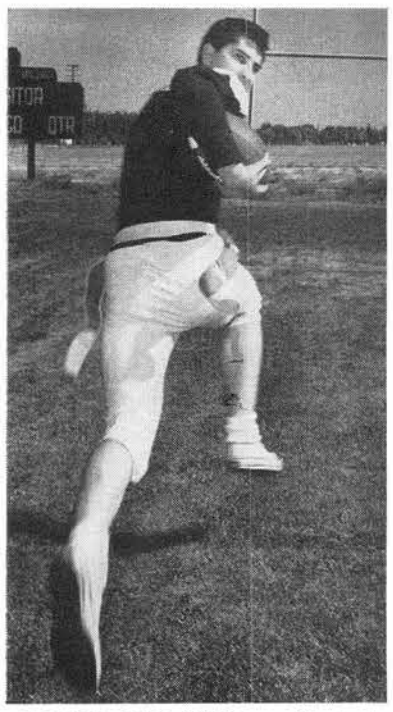
Games will be played on Saturday mornings at the Sandia Base football field. Touch flag football rules will be followed. Referees are provided by Services and Benefits Division 3122. Equipment is also provided.

Is it rough?

No. Rules prevent tackling. It's against rules to leave your feet while blocking. Diving for fumbles is prohibited, as are other maneuvers which might cause injuries. Officials call the plays closely.

Last year, many Sandians brought their children to the Saturday morning sessions. Some were enthusiastic rooters for Dad while others played their own games along the sidelines.

To join a flag football team, contact your recreation council representative or call Services and Benefits Division, ext. 29157.



GETTING THE JUMP on football season is Charlie Salazar (4254). Flag football at Sandia Lab will be organizing during the last week in August. Players are needed. Contact your recreation council representative or Division 3122.

Parents Without Partners to Meet Tomorrow at 8 p.m.

The Albuquerque Chapter of Parents Without Partners will meet tomorrow at the East Central Branch of the Albuquerque National Bank, Elio Cultreri (3211), vice president, reports. George B. Rombold, Jr., St. Paul Lutheran Church Youth Director, will discuss "Juvenile Delinquency" at 8 p.m. The meeting is open to all parents who are without partners, Elio says.

UNITED COMMUNITY FUND directors recently announced that needs of Albuquerque called for $851,000 to be raised by the 1963 UCF drive. Discussing the drive are Lou Gasparini, campaign publicity chairman; S. P. Schwartz and L. P. Gise, members of UCF Board; and W. Lee Hancock, UCF campaign director.

Sandia Lab Employees See Duty With National Guard

Encamped at Hueco Range, north of Ft. Bliss, are members of Task Force One of the New Mexico Army National Guard undergoing annual training exercises. For the past few days, the men have been firing M-42 guns mounted on track vehicles, 3.5 rocket launchers, heavy machine guns, and rifles.

The first group of the Guard moved out July 21 for the annual two-week Field Training. Task Forces Two and Three will be leaving July 28 and Aug. 4. Involved are a total of 3000 men, about 26 of them Sandia Laboratory employees.

In addition to training in occupation of positions, maintenance of equipment, basic crew and military occupation, and weapons handling, other special schools will be conducted. Selected men will attend Senior Artillery courses, classes at the NCO Academy at Ft. Bliss, communications classes, radar instruction, and Army Intelligence courses.

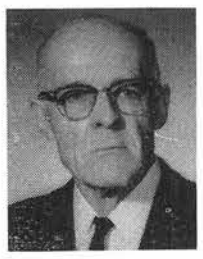
Summer training climaxes a year of regular weekly training drills for the Guard.

Among the Sandians who serve with the New Mexico National Guard are: Peter Olguin (2343), R. R. Beach (2542), Ricardo Chavez (4233), D. C. Cordova (4153), T. C. Garcia (4631), Tony Gabaldon (4516), Orelio Montoya (1122), J. L. Sanchez (3462), C. E. Sandy (1432), G. W. Treadwell (7185).

R. C. Anderson (4413), Mike Barela (2634), Lonie Bryant (3242), D. S. Chavez (2642), W. F. Cihak 2644), D. T. Reed (2444), W. B. Russell (4343), J. F. Schimke (7524), B. L. Stewart (2634), D. N. Frison (4631), P. A. Leonard (3444), C. M. Barnes (1432), L. C. Trujillo (4234), R. R. Boyd (4542), and C. C. Claghorn (2532).

M. R. Taylor Retires At Livermore Lab With 9 Years Service

Retiring at the end of July after more than nine years of service was Maurice R. Taylor, a senior draftsman in Org. 8114-4.



Maurice joined Sandia Laboratory in April 1954, coming from Detroit, Mich., where he worked as a draftsman, designer, design checker, and supervisor. He transferred to Livermore Laboratory in March 1956, becoming one of the first draftsmen to be assigned to Livermore.

Maurice and his wife plan to "travel around for awhile," and perhaps return to Albuquerque and build a house on property they own here.

Women Bowlers Meet

Women bowlers are invited to attend an organizational meeting of the Jewelette League at the Coronado Club, Aug. 6 at 4:45 p.m. Representatives of the Coronado Club and the Bowling Alley manager will be present.

For additional information contact Barbara Vandenberg (3421-1), AX 8-1537.

Welcome Newcomers

July 15-26

Albuquerque
Rosalie Avara 3126
Patricia A. Beatty 3126
James H. Elder 4212
Ann Lola Horton 3126
Willie V. McCown 4516
Alice R. Miner 3126
Edwin E. Moss 4432
Mary Margaret Paxton 4411
M. Josephine Silva 3126
*Fay A. Tome 3126

Connecticut
John W. Logioco, New Haven 4412

New Jersey
Richard A. Hernquist, Newark 1442

New York
Ronald A. Malpass, Albany 7233
James M. Schmidt, New York 5313

North Carolina
G. Barry Long, Gastonia 5414
Elvin P. Lowe, Liberty 1112

Oklahoma
Jerald D. Henderson, Oklahoma City 4411

Pennsylvania
Andrew G. Boutcher, Jenkintown 4412
James W. Brossman, Jr., Reading.... 4412
Eugene T. Dorneman, Philadelphia.... 4412
Walton J. Errickson, Philadelphia.... 4413
Ronald P. Haines, Wilkes Barre 4412
Gerald T. Hermann, Monongahela.... 4412
John P. Keehn, Reading 4413
Mark A. Krahe, Eerie 4412
Stanford A. Major, Nazareth 4412
Timothy I. Ristine, Philadelphia 4413
Dale G. Ruth, Lancaster 4412
Dale P. Shenk, Lebanon 4412
Alexander Solomko, Jr., Throop 4412
George E. Staller, Harrisburg 4413
George R. Vrish, McKeesport 4412
James E. Williams, Ford City 4413

Texas
Fred M. Clifford, Fort Worth 7433

Utah
Harold H. Bateman, Provo 4111

Virginia
St. Clair E. Spaugh, Hampton 5321

* Denotes Rehired

Business Women Elect Sandia's Marie Gilpin As 'Women of Year'

—Marie Gilpin—

The Zia Chapter of the American Business Women's Association has selected Marie Gilpin, secretary for Test Support Department 7240, as its "Woman of the Year." As such, she becomes the Chapter's candidate for the national title of "American Business Woman of the Year," to be announced at the national ABWA convention, slated for Oct. 18-20 in Cleveland, O.

Marie's business experience includes clerking, bookkeeping, cashiering, and secretarial work. In addition to her work at Sandia, she is active in the Methodist Church, Albuquerque Ski Club, and, through her children, is active in work with the Boy Scouts, Campfire Girls, and the PTA. Her hobbies include skiing, swimming, sewing, music, and reading.

Conclusion

Man Still Provides Fertile Ideas for New Reactor Uses

The first 20 years of man's control of the atom brought about changes far beyond those imagined possible. What will the next 20 years bring us? Will the atom put man into the far reaches of space? Based on the past 20 years of accomplishment it is safe to speculate that the next two decades will be even more exciting.

The 20th anniversary of man's control of the power of the atom finds a wide variety of functions and types among the several hundred nuclear reactors now built or building. And there is a fertile stream of new ideas for making them more efficient and more versatile.

Reactors range in power from a few watts of thermal energy in small training reactors to the 800 megawatt electrical power capacity of a new reactor now under construction at the AEC installation at Richland, Wash. In terms of electric power production, this will be the most powerful single unit in the world. Design studies are in progress on single reactors to produce enough heat to generate 1000 megawatts of electricity.

Nuclear power plants are operating in at least six countries—Canada, France, West Germany, the Soviet Union, the United Kingdom, and the United States.

The nine civilian nuclear central station plants operating in the United States as of September 1962 had produced more than 4.3 billion kilowatt hours of electricity for consumers in Illinois, Massachusetts, Pennsylvania, and California. Thirteen more plants are under construction, most of them nearing completion. When these are in operation, there will be an installed U.S. nuclear generating capacity of more than 1000 megawatts (1,000,000 kw) of electric power.

In 1962, the world's first nuclear-powered merchant ship, the 22,000-ton NS SAVANNAH, went into operation and has been visiting ports on the Atlantic and Pacific coasts.

For our own defense and that of the Free World, there are production reactors making materials for nuclear weapons. Nuclear-powered submarines set one record after another in speed, time submerged and maneuverability. Surface nuclear-powered warships also are setting new records. The AEC is developing for the Army a family of small, transportable nuclear power plants for base and field use. Units of this type are operating at McMurdo Sound, Antarctica and in Alaska and Greenland.

Many reactors are used for testing materials, for research—basic and applied — and for training and education.

It had not been possible to put a nuclear reactor into space by the 20th anniversary of the first pioneer pile. There is confidence, however, that before another score of years passes, nuclear-propelled rockets will be taking man on expeditions to explore the far reaches of space. Already, "atomic batteries" which convert to electricity the heat generated by the decay of radioisotopes are furnishing power to run instruments aboard earth satellites.

In addition to radioisotopic power, the impact of ever-expanding uses of large quantities of many varieties of radioisotopes, made possible by nuclear reactors, is being felt in many fields of basic and applied research. The application of radioisotopes to medicine, industry, and agriculture is alleviating pain, making industrial processes more efficient, creating new products and saving millions of dollars for farmers.

The vast array of accomplishments and advances in man's use of nuclear energy in the past 20 years represents the work of thousands of nuclear scientists and engineers, and government, educational and industrial managers and administrators.

High on any list of those who made major contributions is the name of Enrico Fermi who, posthumously in 1954, was the first recipient of what is known now as the Fermi Award, presented annually by the President of the United States.

This first award, signed by President Eisenhower, said simply:

"An Award of Merit to Enrico Fermi for his contributions to basic neutron physics and the achievement of the controlled nuclear chain reaction."

This article concludes the series on man's first 20 years of adventure with nuclear power.

Sailors Take Bull by the Sails In 'El Toro' Class Boat Races

The "El Toro" boats leaped forward like a herd of charging bulls. Bucking and chomping the water the tiny dinghy-type sailboats skidded around the short course in four heats, skillfully maneuvered by their Sandian skippers.

In this recent El Toro race near Oakdale, the first of the season for Sandia enthusiasts, Joe Sladky (8121-1) took first place, and M. O. Jones (8165) came in last. Eight skippers competed.

The Sandia El Toro owners and their families regularly hold week-end races and outings throughout the summer. A first place trophy and a booby prize are awarded in the races.

Others taking part in the season's opening race were Glen Branvold (8141-1), Bob Schaefer (8158-1), Ken Byrne (8165-2), John Herbolsheimer (8141-1), Verne Field (8116-3), and Bob Tockey (8144-1).

El Toro, which means "the bull" in Spanish, is the term applied to an eight-ft.-long variety of sailboat. The boat was developed in 1940 as a result of a series of "bull sessions" held by a San Francisco Bay boating club.

Proved Popular

Club members wanted a small, light, fast boat they could use for sailing as well as for a yacht tender. They devised a boat which proved so popular that many more were built and an El Toro Association was formed. Today, the Association boasts more than 3000 registered members, with each member's boat built to strict specifications. The Association is headquartered in Berkeley.

At Sandia, the fleet of El Toros began with five men last year—Joe Sladky, Glen Branvold, Verne Field, Bob Tockey, and M. O. Jones.

"We heard about the flexibility of El Toro boats and decided to pool our efforts and build some in our garages," said Glen. "We started the first boat in January and launched it in April. Building the rest was comparatively easy since one of the biggest jobs is building the form to build the boat around.

"We had a tough time finding some spruce for the spars," he said. "So when I went back home on vacation in Northern Idaho, I stopped by one of the lumber mills there and had some especially cut for us. We imported our dacron sails from England.

"The boats are easy to build and are lots of fun," said Glen. "They'll do everything the biggest sailboats will do and in many ways are more adaptable. However, because they're so light, they're limited to lakes and rivers. They're very fast on the water, but tip over easily."

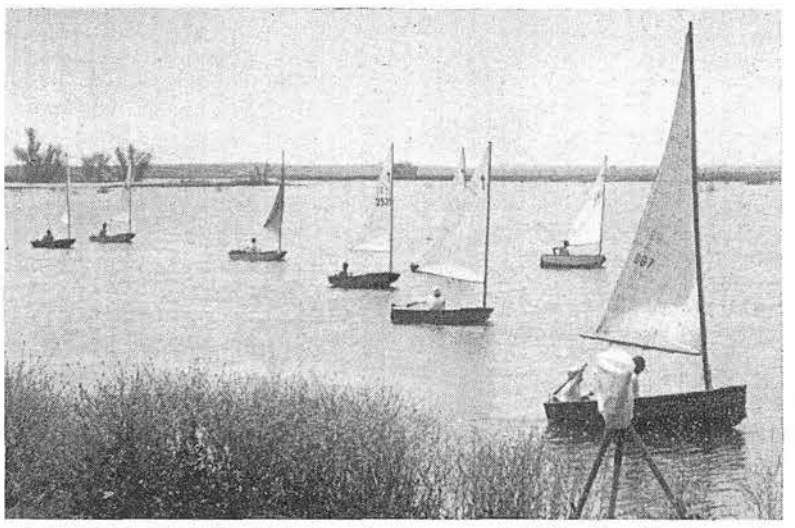
Building an El Toro will take about six weeks of spare time to complete, according to Glen. The cost, if you build it yourself will run about $110, allowing $40 for a sail. Ready-built models sell for $240 to $350.

"We still have the form we used to build the first boats," said Glen, "and anyone else who wants to build one is welcome to use it. We'll also give free advice."

Future plans of the Sandia fleet include eventually taking part in one of the annual Association races across San Francisco Bay where the water is so rough each entrant is accompanied by a large power boat in case he spills. This year, 150 boats were entered in the race.

BOB TOCKEY (8154-1) takes wife Sally for a pleasure ride in the El Toro boat he built before competing in the race. The number on the sail indicates he was the 3,157th to join the El Toro Association.

livermore news



SANDIANS RACE for first place in this recent "El Toro" sailboat event near Oakdale. Start and finish point in the race which followed a circular course is the tripod marker in the foreground. Larger boat in the lead, skippered by Verne Field (8116-3), is not in the El Toro class.

8214 Team Leading at Mid-Point In Slow-Pitch Softball League

At the midway point in the Sandia Slow-Pitch Softball League, the 8214 team was out in front with six wins and one loss to its credit. At press time, seven games and a play-off were left to play in the season.

Threatening the 8214 position were the 8110 and 8240 teams, each with five wins and two losses on the books. The 8140/8160 team was tied for third place with the 8120 team, with a standing of four wins and two losses.

Neck and neck in the fourth position were the 8120 and 8150 teams, each with two wins and five losses. Next in line was the 8220 team with no wins and seven losses.

Team captains in the league are William Scott (8214), Tabo Hisaoka (8110), Frank Cupps (8230), Jack Simpson (8140/8160), John Neuberger (8120), Harlin Pound (8210), Curt Franklin (8150), and Don Guisti (8220).

8225 Picnic

A beach and water skiing outing at Frank's Tract in the Delta Area was held recently by employees of Inspection and Electronic Fabrication Division 8225. Attending were 26 members of the division and their wives and husbands.

Arrangements for the outing were made by Gordon Kibby (8225-1). In charge of food arrangements was Jessie Berry (8225-1). Boats were provided by Ernie Alford (8225-1), and Gordon Kibby.

Arabian Horse With Unusual Talent Is Trained for Roping Competition

Conrad Rogers (8222-2) has been doing some light horsekeeping in a pasture near Livermore, training his Arabian horse Banner for a career in steer roping.

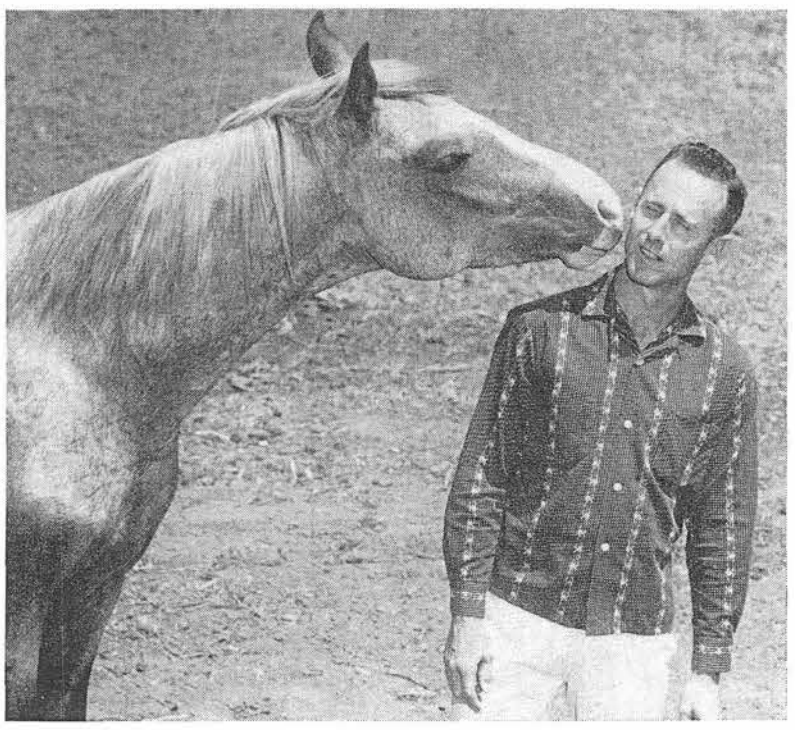
The two-year-old strawberry roan is more like a family pet than a work horse, according to Con, who spends about eight hours a week riding and training Banner. "He follows me around everywhere I go. If I'm working in the field, he's just likely to pick up my tools and carry them off in his mouth."

Tools aren't the only things Banner picks up. "He has even picked up stray calves with his mouth and carried them back to the herd. Once he latched on to a 350-lb. steer and turned him around by the scruff of the neck," Con said.

Con's two boys, Gary, 8, and Greg, 13, spend much of their time with Banner, riding and roping. Eventually they hope to enter him in roping contests and rodeos around the Bay Area.

Raising horses is nothing new to Con, who owned his first horse when he was a boy of 12 in Silver City, N. Mex. Since then he has had 20 horses, including five at one time. Banner is the first Arabian horse he has owned; all the others were quarter horses. "I don't think I've ever owned a horse as intelligent or as friendly as Banner," Con said.

Banner has three horses to keep him company when his master is away. Two are owned by Jim Austin (8234-5) and one belongs to Ken Riddle (8234-4).



STRAIGHT FROM THE HORSE'S MOUTH, Con Rogers (8222-2) gets a loving nuzzle from his Arabian horse, "Banner." The two-year-old horse enjoys chewing the fat, especially the fatted calves which share his pasture near Livermore. He picks up strays, returning them to herd.

Sympathy

To K. E. Helmstadter (8166-1) for the death of his mother in Lincoln, Nebraska, July 12.

To Gerry Woods (8225-1) for the death of his mother in Klamath Falls, Ore., June 28.

Weddings

Kitty Dyson (8234-5) and Dale Kinzer were united in marriage July 13, in ceremonies performed at the bride's family home in Livermore. Following a brief honeymoon, the couple moved to Belaire Apartments in Livermore. Kitty has been at Livermore Laboratory since May 1962.

Mary Vincent (8212-4) became Mrs. Rich Bier at wedding ceremonies in Reno, Nev., July 8. She and her husband are now living at 751 Morage Drive, Livermore. Mary has been at Livermore Laboratory since December 1958.

Marguerite Mihoevich (8220) will become the bride of Louis J. Wright at ceremonies at St. Michael's Church in Livermore Aug. 17. The couple will make their home at 5324 Holiday Drive, Stockton. A Sandia employee since April 1956, Marguerite was the first woman to be hired at Livermore Laboratory.

Beck's Score of 64 Nets Him Victory In Sandia Golf Meet

Earl Beck (8115-2) captured low gross and low net scores to win first place in the Sandia Golf Tournament played July 13 at San Mateo. His 13 handicap gave him a low net of 64.

Tied for second place were C. A. Seibel (8114-3) and Jack Bonetti, former Sandian. In third place in another tie were V. K. Gabrielson (8142-1) and D. J. Timmer (8166-2).

Six players tied for the fourth position. They were G. K. Van Gundia (8166-1), W. R. Wall (8126-2), J. N. Barnhouse (8225-2), G. L. Young (8142-2), R. E. Maxwell (8214), and M. M. Lettrich (8243-3).

Congratulations

Born to:

Mr. and Mrs. Jerry Huntting (8165) a son, Thomas Leslie, on July 14, 1963.

Mr. and Mrs. L. B. Green (8122-3) a son, Loren Jonathan, on July 16, 1963.

Mr. and Mrs. David E. Arnett (8121-3) a daughter, Julie Nancy, on July 17, 1963.

Mr. and Mrs. Lyle E. Hake (7257) a daughter, Susan, on July 17, 1963.

Mr. and Mrs. O. C. Thomas (8142-3) a son, David Charles, on July 3, 1963.

Mr. and Mrs. G. L. Young (8142-2) a son, Douglas Scott, on June 26, 1963.

SHOPPING CENTER

FOR SALE

RIFLE, Remington Model 760A, .270 cal. J. Smith 656-2072.

RIFLE, Remington Model 552, .22 cal. automatic, w/4x Weaver Scope, $50. Seibel, ext. 2644.

16-ft. FIBERGLASSED INBOARD and trailer, $900 or trade for outboard of comparable value. Rich, JE 8-7706.

13½ ft. RUNABOUT, plywood w/fiberglassed bottom, 25 hp outboard w/remote controls, ski equipment, $275. Schultz, 447-4159.

'53 FORD SEDAN, 4 door, OD, R&H, $350. Murar, VE 7-6633.

COMPRESSOR & TANK, 1 regulator and 25 ft. hose, $25; 1 set Monro over-load shocks and 1 set over-load springs that go over shocks, $13. Ivens, 447-2352.

23-ft. OWENS INBOARD cabin cruiser, 6 cylinder engine, sleeps 4, has head, galley w/stove, table, full canvas, $2600; Berthed at Bethel Island. Wright, 447-3303.

WANTED

3 BEDROOM SETS w/double beds; Living room set. Dekker, 447-3865.

TWIN BED w/mattress and box springs, small desk. Rindone, 447-4438.

MAN to share a 2-bedroom apartment with 2 other men. Seibel, 2644.

ADULT SLEEPING BAG for rent or borrow from approx. Aug. 1-15, for 15-year-old son's camping trip. Mrs. Goodrich, 447-6396.

CAR POOLS

RIDER/DRIVER wanted to complete 5-man car pool from vicinity of Hesperian Blvd. and Freeway in San Leandro. Koetting, 352-1560.

FOUND

BLACK BULKY Knit Sweater, ext. 2238.

SPECIAL

CRUISE THE DELTA in a Trojan Express Cruiser U. S. Power Squadron Skipper. Share expenses. 1 or 2 day trips. Wishart, YE 5-3757.

Santo Domingo Indians' Corn Dance Colorful All-Day Ancient Celebration

Most people who watch television have an idea that western Indians aren't friendly. But if they were to visit the centuries old Santo Domingo Indian Pueblo, located along the Rio Grande North of Albuquerque, they would change their mind.

The great occasion happens this year on Sunday, Aug. 4. It is the annual Fiesta of St. Dominic and "Green Corn Dance," to be held at the Santo Domingo Indian Pueblo, just off U.S. Highway 85 between Santa Fe and Albuquerque.

The Corn Dance tradition goes back before the coming of the White Man and his sacred images, before the Santo Domingoes heard of the St. Dominic they later adopted as their pueblo patron saint.

The magnificent pageant includes as many as 500 dancers at a time on the plaza. The ceremony begins with a Christian service which turns into a pagan rite as colorful and interesting as any in existence.

CORN DANCE PHOTOGRAPHY is not permitted by the Santo Domingo Indians. But there is plenty of other color in the pueblo to delight the camera fan. Here, tourists bargain for some brightly-designed pottery.

Preparations for the annual ceremonial have been going on most of the summer. Costumes—some of them dating back more than 100 years—have been carefully prepared; the adobe mission and homes have been replastered outside and redecorated inside; supplies of vegetables have been collected from pueblo gardens, and sheep have been slaughtered and butchered for the great feasts that will follow the dances.

A Catholic priest arrives at midmorning at the pueblo to celebrate Mass in the pueblo mission, which was originally built in 1605. At the conclusion of the service, the "rickari"—image of St. Dominic — is carried out of the mission. The image is accompanied by a drummer and a bugler, and off to the side there is a crashing salute from guns fired by the young men of the pueblo.

St. Dominic is carried across the plaza to an intricately made bower at the other end. Candles are lighted, and the pueblo women bring offerings of bread, fruit, and mutton stew — all placed directly in front of the saint.

Inside the bower are seats of honor occupied by the tribal elders. And this is when the dancing begins.

The dancing starts after the 10 o'clock service. It continues all day.

—Charles J. Mauck—

Sandia Speakers

R. L. Schwoebel (5152), "The Growth and Structure of Oxide on Single Crystals of Magnesium," Gordon Research Conference on Corrosion, July 22-26, New London. N. H.

J. F. McDowell (2564), "High Vacuum Applications in the Albuquerque Area," Midwest Section of the American Vacuum Society's Vacuum Seminar, June 27, Kansas City, Mo.

J. R. Holland (5135), "Quantitative Determinations and Descriptions of Preferred Orientation," 12th Annual Conference on Applications of X-Ray Analysis, Aug. 7-9, Denver, Colo.

G. P. Steck (5425), "Tabulation on the Multinomial Distribution" (computer tape), International Symposium on the Classical and Contagious Discrete Distributions, during August at McGill University, Montreal, Quebec, Canada.

J. O. Wear (5153), "A Determination of True Transference Numbers and Relative Solvation Numbers in Mixed Solvents," Solvation Symposium, in August at University of Alberta, Calgary, Alberta, Canada.

C. J. Mauck Takes Command of Local Naval Reserve Unit

Charles J. Mauck, supervisor of Design Services Section II, 7214-2, has assumed command of Naval Reserve Unit 8-7 in Albuquerque, effective July 1. E. F. Johnson, supervisor of Engineering Section B, 2344-2, is the outgoing commanding officer of the unit.

Lt. Mauck enlisted in the Navy in 1941, and served during World War II as an aviation radioman and technician. He was recalled to the service during the Korean conflict, and served as a damage control officer.

He has served for over 19 years with the Naval Reserve, the last five of which were spent with Research Reserve Company 8-7. This company is under the cognizance of the Office of Naval Research.

A member of the Navy since 1942, Lt. Johnson received his commission through the Naval Reserve Officers' Training Corps program at UNM in 1945. He was stationed in Florida in 1946, where he was attached to the Third Fleet. He joined Naval Reserve Unit 8-7 in March 1953, and assumed its command in July 1962.

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CLASSIFIED ADVERTISING

Deadline: Friday noon prior to week of publication unless changed by holiday.

RULES

1. **Limit: 20 words**
2. **One ad per issue per person**
3. **Must be submitted in writing**
4. **Use home telephone numbers**
5. **For Sandia Corporation and AEC employees only**
6. **No commercial ads, please**
7. **Include name and organization**

FOR SALE

3-BDR., 2 bath, w/w carpeting, draped, walled back yard w/brick barbecue, some appliances and furniture, at appraisal, low equity. Oline, 268-6606.

BICYCLES, girl's 20", boy's 26". Garcia, 832 Manzano NE, AL 6-6609.

'52 HILLMAN MINX 4-dr. sedan, 13,000 miles since overhaul, compact, economical, $250. Lemmon, AL 5-2028.

'55 PONTIAC 2-dr. HT, R&H, w/w, $350; 3 used 8.20x15 w/w tires; 2 15-in. wheels for Chevrolet. Wilson, AX 8-0049.

16" WIZARD oscillating fan, $25; table saw w/motor, $60. Huff, 299-3202.

16' CAMP TRAILER, sleeps 6, electric brakes, stabilizer jacks; dinette set, 4 chairs, 36x48 w/12" leaf; double bed mattress. Dubbins, 299-5562.

CAMERAS, Exacta (VX), 58mm Biotar preset F2, $75; Exacta (VX), 35mm Super Lithagon preset F2.5, $65; or $120 for both. Olajos, AL 6-1649.

KENMORE portable dishwasher, motor needs repair, $25. Ezell, 268-4845.

PROPELLER, Mercury #48-23586A, fits 1957-62 4-cyl. Mercs., will sell or swap for OMC gas tank. Meikle, AX 9-4640.

3-BDR., 1¾ bath Hoffman home, sprinklers, patio, $16,200, 2523 Gen. Bradley NE. Gilpin, AX 9-1100.

REFRIGERATOR, GE, about 9 yrs. old, 11 cu. ft., $50. DeLollis, AX 9-5384.

3-BDR. MOSSMAN, den, 1¾ baths, 2 fireplaces, walled yard, near schools, $15,950 w/existing loan, 1016 Field Dr., NE. Kadlec, AM 8-8144.

MOBILE HOME, '60 Hicks, 8'x36', 1 bdr., completely modern, many extras, $3900. Wentz, AX 8-2630.

REFRIGERATOR, 9 cu. ft. Frigidaire, about 12 yrs. old, $25. Womelsduff, AX 9-6269.

WHIRLPOOL electric clothes dryer, $25; three metal lawn chairs, $2 ea. Savage, AX 9-7130.

GREEN COUCH and grey chair, nylon fabric, 1½ yrs. old, $75. Burd, 256-6040.

HOMART cartridge type filter for large plastic swimming pool, fittings and vacuum cleaner included, $50. Fifer, 299-7258.

'59 LARK, straight shift, see at 1216 Alcazar. Gasser, 255-3604.

3-BDR., den w/fireplace, 2 baths, grade school 2 blocks, $1250 below market for quick sale, corner lot. Ray, AX 8-0408.

VACUUM CEANER, Kenmore upright, largest model, $20. Sundberg, AX 9-2177.

PRETRON TAPE RECORDER w/7" tape, $15. Gragg, AX 8-0267.

THORENS TURNTABLE TDK-101 Fairchild arm and 232 stereo cartridge, mounted on base. Turner, 299-7347 after 5 p.m.

17" PHILCO CONSOLE, blond, rebulit tube; 14" Silvertone console, working condition, $12.50. Henry, 255-2536 after 5 p.m.

SHARE in Crossroads Flying Club, Cessna Skylane, Doyn 172, Tripacer available. Perkins, 298-4546.

ALFALFA HAY, $1.25/bale. Shafer, 8733 Fourth St. NW, DI 4-4019.

ACCORDION, 120 bass Camerano, $250. Edwards, BU 2-3348.

STENOGRAPH MACHINE w/tripod and carrying cases, instruction books and transcription box. Young, AL 6-1361.

FRIGIDAIRE ELECTRIC RANGE, Deluxe model, $60. Browning, AX 9-0169.

TIRES, four blackwall, 800x14, ⅛" thread, no breaks, $5 ea. Nix, 2813 Virginia NE, 298-4282.

POWER MOWER, reel type, 20"-cut, w/ basket, used ½ summer, $60 or trade for small cement mixer in good condition. Courtin, 299-9056.

3-BDR, den w/fireplace, 1¾ bath, carpeting throughout, drapes, a/c, sprinklers, double carport. Wente, 1816 Blume, NE, AX 9-3402.

'58 RAMBLER V8, standard trans., recently overhauled, $700. Wesnak, 265-4765.

COUCH AND CHAIR, forest green, $35; 2 electric fans — 10" and 12"; 2 irons, 1 travel iron; pressure cooker; chicken fryer. Carpenter, AX 9-4312.

NEW 3-bdr., 1½ baths, on ½ acre, $500 pays down to loan, $73/mo. Cummings, 298-5173. after 5 p.m.

ENGLISH SPRINGER SPANIEL pups, purebred, registered with AKC. Barth, BU 2-3134.

WORLD WAR I illustrated books; 16mm sound projector; 9x13 tent. Laskar, AX 9-1024.

2-WHEEL TRAILER, lights, new paint; 3-acre cabin site, 24' trailer, some improvements, Pecos Wilderness area. Cannon, AX 9-4592.

3-BDR. BRICK HOUSE, 1¾ baths, double garage, 1 block north of Winrock, extras, walled, a/c, FHA. Sackey, AX 9-8255.

TWO CRYPTS in Mausoleum, $450 under selling price. Pierce, AL 5-7923.

FREEZER CHEST, 18 cu. ft., $150; ping pong table, 4'x9' folding type, $15; wall pool, aluminum, 12' dia. x 2' deep, $35. Bentz, AX 9-5019.

4000 CFM evaporative air conditioner, used two months last year, $70. Perusich, 298-4870.

PISTOL, .45 automatic, 2 boxes shells, holster, $35; .45 revolver, 1 box shells, $20; German 9mm P38, $22.50. Mattox, 268-5554.

DAVEN-BED, beige, gold and turquoise, gray wood inset, one end, $50; green davenport, 6'10" long, matching chair, $75. Kochmann, AX 9-5133.

SINGER SEWING MACHINE, portable, electric, $35. Neitzel, DI 4-8685.

'55 CHEVY, 6-cyl, std. trans., $495. White, AL 6-3077 after 5 p.m.

16" HAND LAWN MOWER, $7. Giddings, 298-6221.

TWO CHAISE LONGUES, aluminum frame w/spring filled cushions, pair $10. Calek, 282-3285.

TWO FRONT HUBS for 1951 model 2-wheel drive Jeep wagon, both for $3. Frasier, AX 9-6933.

FREE, 3 puppies, can be seen at Alameda Animal Hospital. Muench, 344-5453.

CUSTOM BUILT SPORT COUPE, new rubber, $195. Baudoin, 3512 Espejo St., NE., AX 9-8101.

ROBERSON HOME in Paradise Hills, $13,500 total, low down payment, no qualifying. Mocahbee, AL 5-7886.

NEXT DEADLINE FOR SHOPPING CENTER ADS Friday Noon, Aug. 9

'62 SCOUT 4/wd., Warren hubs, R&H, long cab. Overton, 255-0822.

'61 MERCEDES BENZ 220-S, 4-dr. sedan, 15,000 miles, service records, safety belts, tachometer, $3200. Stanley, 265-1080 after 5 p.m.

1961 KENMORE GAS RANGE, $30. Hudson, 298-6037.

10' PLASTIC POOL, 2' deep, metal sides w/cover. Grant, 255-6105.

BOY'S sport coat, size 16; dress pants, size 16; boy's ice skates, size 6, new; '61 Honda cub scooter. Brown, AX 9-1689.

8" TABLE SAW, motor and steel stand. $45; 2 bar wood car top carrier, $4. File, DI 4-8853.

BLOND DINING ROOM SET, $150; kitchen set, chairs need recovering, $15; baby carriage, $25; plastic diaper pail, $3. Higgins, AX 9-5149.

HARDWARE for overhead garage door. Hostetler, 1021 California SE, AL 6-3803.

TV, 21" Silverton portable, 1960, needs antenna repair, $40. Scott, AX 9-3412.

3-BDR. PUEBLO style, 1740 sq. ft., 1¾ baths, 15x14½ den, 15x14½ utility-playroom, patio, a/c, FHA $15,500, GI $16,000. Barber, 3828 Simms, SE, 299-1752.

GE 21" TV, blond finish, '58 model; blond coffee table; both for $100. Thorp, 298-6030.

GE automatic clothes washer, $40; Tappan gas range, 36", divided top, $20; both for $50. Banos, AL 6-6613.

THREE 8:20x15 tires, used, no breaks, $4 ea. see at 7723 Robin NE. Mares, AX 9-6958 after 5 p.m.

40" GENERAL ELECTRIC colored range, pink, reluxe model, push buttons, automatic oven. Scott, AX 9-7893 after 5 p.m.

COLDSPOT REFRIGERATOR, 7'. Dunlap, 265-4089.

12'x17' CARPET w/pad, $50. Murphy, 256-1130 after 5 p.m.

'49 PLYMOUTH 4-dr., $125. Harness, AX 9-6639.

LARGE LOT in Glenwood Hills, good view of mountains and city. McVey, 268-9229.

SOFA and 2 occasional chairs, $45 for all. Monette, 268-0380.

'58 MOTORCYCLE, 125cc, Harley Davidson Hummer, newly overhauled, $125. Howe, DI 4-4798.

35MM ARGUS Matchmatic camera w/ case, light meter and flash gun, $30. Abeita, ext. 34169.

'52 DODGE PICKUP, best offer. Hanna, AM 8-2323.

ONE-WHEEL luggage trailer w/extra tire and two types of hitches. James, AX 8-0709.

TWO Siemer hearing aids, cost $600. sell for $200; 4-yr.-old Bay, Quarter Horse Stud, no papers, $150. Newton, 344-6703 or 877-1349.

'54 FORD 4-dr., R&H, OD, by original owner, $375. Gies, 256-1461.

MOTORCYCLE, 1956 Triumph Tiger Cub. Arasim, 242-6285.

UPRIGHT PIANO, $80. Perea, AM 5-0861.

'58 PONTIAC station wagon, straight shift, V-8, R&H, tinted windshield and padded dash. McDowell, AX 9-6222.

MOSSMAN 3-BDR, 1¾ bath, DR, double garage, a/c, under appraisal, 3000 Dakota NE. Hanson, 256-7846.

'60 VW, $1100. Sayers, 344-8597 after 5 p.m.

'55 PONTIAC 2-dr. HT, PB, R&H; girl's 26" bike; dinette table w/brown formica top; hand mower. Cericola, AX 8-2426.

18' GLASPAR CRUISER w/twin 50 HP Mercury outboards; 3-burner Coleman campstove. Dollahon, 299-8107.

BOXER PUPPIES. Bewley, 1617 Utah NE.

TIRE, 7:10x15, 27-month Tyrex, w/tube; 6-volt battery; Cosco high chair. Anderson, ext. 27174.

'61 RAMBLER METRO, 10,000 miles; '53 Studebaker, standard/OD; 2 ea. twin beds; Singer vacuum cleaner. Naumann, 298-6476.

COLDSPOT refrigerator w/freezer unit. Vaughan, 299-5676 after 5 p.m.

MATCHED ENSEMBLE for children's room: twin bedspreads, 2 pr. drapes, 40" wide, $10; fireplace screen and andirons, $6. Joseph, 299-6989.

STEREO Garrard type A, Dynakit stereo 70 and PAS2, two Warffdale W40's, $350 or will sell components separately. Thorne, 256-7865.

'53 BUICK Special 2-dr. stick shift, R&H, seat covers, front seat belts, $165. Driver, 256-7941.

REVERE, 8mm, Tri-Zoom lens movie camera and projector, originally $250, sell for $175. White, AL 6-3077 after 5 p.m.

'58 DODGE ½-ton pickup, V-8 engine, 4-speed trans., $650. Andrews, AL 6-7328.

SHOTGUN, Winchester model 12, 12 gauge, 2¾-in. chamber, modified choke, $75. Kubiak, 256-1513.

1931 WILLYS, 4-dr. sedan, wooden spoke wheels, ready to restore. Braasch, 299-7514.

'58 OLDS SUPER 88; Winchester model 12, 12 gauge w/case; 16 hp outboard motor; .22 Hi Standard SK-100 w/holster. Gregory, AL 5-8066.

ELECTRIC RANGE, 30" Westinghouse. Hanson, 268-2166.

ELECTRIC CLOTHES DRYER, Whirlpool, 110 or 220 volt, $60; 21" TV, $50. Healey, 298-1755.

PIANO AND BENCH, upright grand, light finish, located in Princess Jeanne area. Quanlan, AM 8-5665.

'57 CHEVROLET 4-dr., V-8, $550. Sanchez, 243-7277, 840 Loma Hermosa, NW.

'61 VOLKSWAGEN, w/w, vinyl upholstering, low mileage. Seay, AX 9-5270.

BOY'S 26" BICYCLE, new fenders, seat, pedals and spring type book carrier, has thornproof tubes. Hutton, AL 5-7435.

REFRIGERATOR, $50. Deller, 298-3260.

12-VOLT CAR COOLER, evaporative; baby car seat; small 5-drawer chest; pedal driven toy car. Randall, AX 9-3935.

BROWN SOFA AND CHAIR; limed oak coffee table and 2 step tables; 2 lamps; stroller; playpen; rollaway bed. Canon, AL 6-2458.

ALMOST ANTIQUE 1950 Chevrolet 2-dr., it runs, $50. Reid, 344-0521.

ADDING MACHINE, cost $19, sell for $9. Hill, CH 3-3493.

WEDDING GOWN, floor length, lace, size 7-8, worn once. James, 255-8429.

'56 MERCURY station wagon, 9-passenger, R&H, PB, safety belts, other extras, $375 or best reasonable offer. Summers, AX 9-4674.

BABY BED w/mattress, $12; playpen, $6; stroller, $3; jump chair, $2; spring horse, $3; light sleeping bag, $3. Taylor, AL 6-2837.

'59 SIMCA, noisy trans., $200. Pritchard, 268-9618.

3-BDR., carport, landscaped, immediately adjacent to base, low down, low monthly, total under $10,000, completely remodeled, name terms. Eiler, 265-1097.

COMBINATION CONSOLE, 24" TV, HiFi record player and radio, $160. Abegg, 298-2498.

FOR RENT

STALLS w/yard and open corrals for horses, Rt. 6, Box 642 on South 85. Newton, 344-6703.

FURNISHED, clean 1-bdr. apt., lots of cabinets, large closet, couple, no pets. 304 Wyoming NE, Lawrence.

2-BDR., redecorated, built-in range, ceramic bath, extra storage room, walled yard, NE Heights. Norvill, 255-2787.

SMALL APT. Anderson, ext. 27174.

2-BDR. unfurnished apt., $65/mo. Sanchez, 565 Estancia Dr. NE.

WANTED

GIRL'S 26" Bicylcle in good condition, must have coaster brake, not hand brakes. MacDougall, 298-3396.

DRIVER-RIDER for car pool, drive 1 day a week, vicinity of Morris and Love NE in Princess Jeanne Park. Lindsey, 298-0818.

PORCH GLIDER. Kent, AL 6-1221.

TO RENT: two, three bdr. house, beginning Aug. 21-26, send following information: monthly rent, house's type, age, location nearest grade school, LDS Church. Arave, 1521 Delta #1, Salt Lake City, Utah (new hire).

THREE CARPOOL MEMBERS needed to join car pool vicinity of Eubank and Candelaria. Anderson, AX 9-9336 or Guist, AX 9-9060.

DRIVER to share expenses on trip to New York City, leaving Aug. 22, return Sept. 1. Gottlieb, 345-1009 after 6 p.m.

TO TRADE two Hollywood mufflers from '59 Buick for quiet ones. Stephenson, AX 9-3914.

MOTOR SCOOTER WHEELS, 16" dia. front and rear; also want misc. parts. Marsh, AX 9-2098.

TO RENT TRUCK and over-cab camper for two-day weekend. Wilson, BU 2-3225.

INSTRUCTION MANUALS for Model RDZ radio receiver, and Model I-177 tube tester. Laskar, AX 9-1024.

MATE for male AKC silver, miniature poodle; carpool for afternoon kindergarten from N-10 and 66 vicinity. Workhoven, 282-3246.

PIANO in good condition, prefer walnut finish in studio, console, or spinet models, will consider any offer. Rose, 255-0144.

HOMES for kittens, weaned, house broken, one long-haired Siamese. Harroun, 299-9048.

LADY WISHES transportation to San Francisco area; share expenses and driving, references. Wilson, 298-3579.

SHARE RIDING PASSENGERS between Gen. MacArthur, west of San Mateo, or neighboring area, to Sandia. Salazar, DI 4-8902.

TWO TEAMS for Sandia major bowling league, team max. average—880. Gillett, BU 2-3146 or Reed, AX 9-7425.

RIDE from vicinity of San Pedro and Kathryn to vicinity of Bldg. 805 and return. Eiler, 265-1097.

Supervisory Appointments

F. E. BELL to supervisor of Division in 3420, Administrative Assistant-3000, effective Sept. 1.

Frank came to Sandia in 1951, and became supervisor of the Staff Employment Section in 1955. From 1956-58, he was chief of the administrative branch of the Atomic Energy Commission's Sandia Area Office. In 1958, he returned to Sandia and joined the training staff, becoming supervisor of the Management Development Section in November 1961. He became Administrative Assistant to R. B. Powell, Vice President, Personnel 3000, in March 1962.

Before coming to Sandia, Frank was Assistant Secretary of the Board of Directors and a staff economist for the Export-Import Bank of Washington, Washington, D. C.

Frank's currently first vice president of the Chaparral Council, Girl Scouts of America.

He served five and one-half years of naval duty with the Pacific Fleet during World War II.

RICHARD S. COOK, Jr., to supervisor of Systems Procedures and Data Processing Division 8231, Livermore Laboratory.

Dick joined Sandia Corporation in 1955 where he worked in product change control and manufacturing engineering before transferring to Livermore Laboratory in 1957. He was promoted to section supervisor in February 1959.

Before joining Sandia, Dick worked part-time for an engineering firm in Seattle, Wash., while attending the University of Washington, where he received his Bachelor's degree in mechanical engineering in 1954. He also holds a BS degree from Washington State University which he received in 1951.

Dick is a veteran of two years service as an Army Signal Corps officer.

G. W. McClure Presents Paper to Paris Conference

G. W. McClure, supervisor of Research Division II, 5152, presented a technical paper in Europe recently. "Charge Exchange and Dissociation of H+, H+2, and H+3 Ions Incident on H_2 Gas" was given at the Sixth International Conference on Ionization Phenomenon in Gases. The conference was held in Paris July 8-13.

In addition, Mr. McClure attended the Third International Conference on the Physics of Electronic and Atomic Collisions, in London July 22-26.

'Golden' Horseshoe To Be Pitched at Court Ceremony

Saturday, Aug. 10 will be a big day for Parker Burns (2643) and the Albuquerque Horseshoes Club. After a four-year campaign by the club, the Albuquerque Municipal Horseshoes Court will become a reality in Los Altos Park.

As President of the Horseshoes Club, Parker will be on hand during the opening ceremonies tomorrow at 8 p.m. L. J. Heilman (2600), City Commissioner, will officially open the 12 clay courts by pitching a pair of "golden" horseshoes.

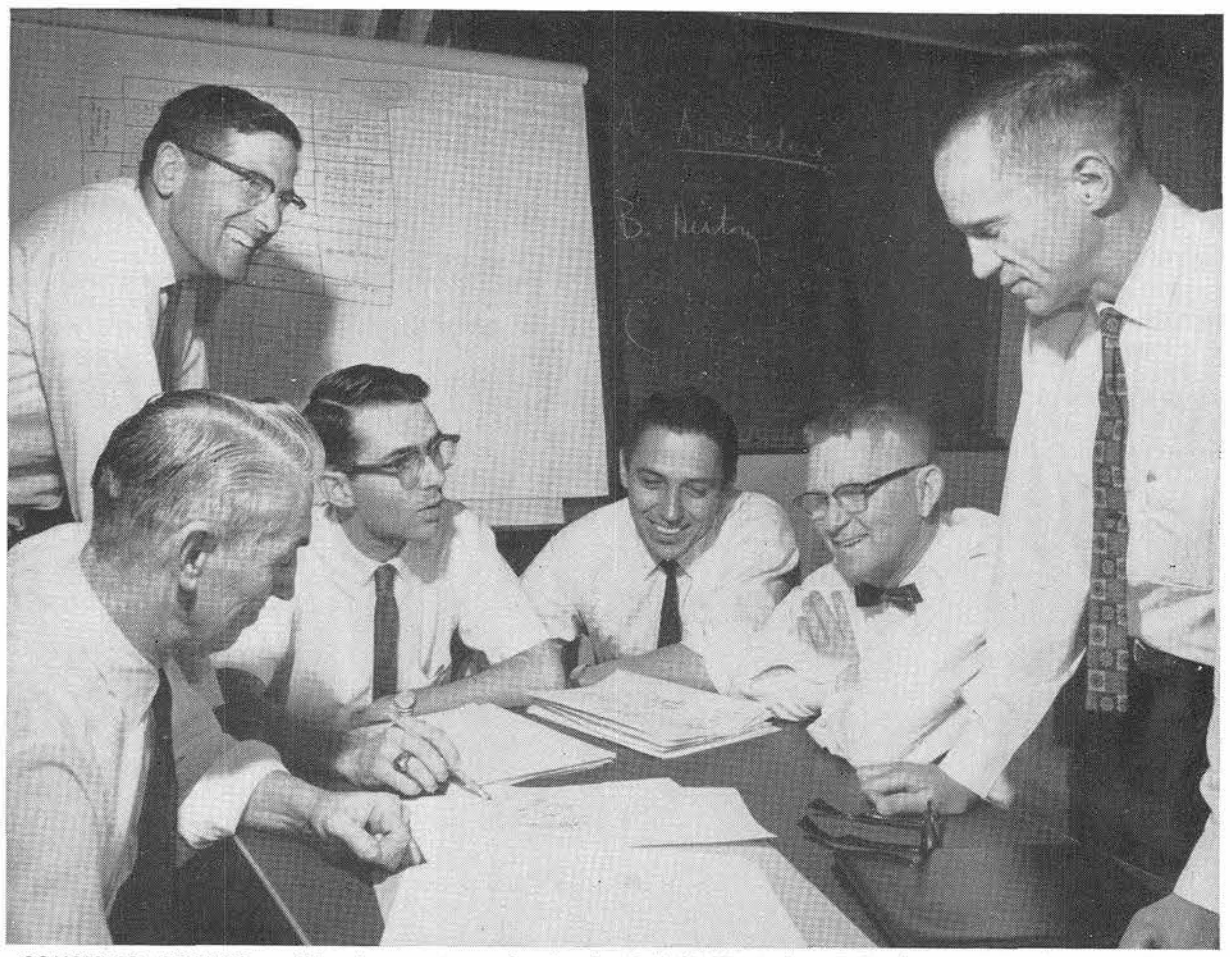
Later this month, the "Golden Shoe Tourney" will be played on the new courts. Sponsored by the Albuquerque club, the meet will be a statewide open tournament.

Safety Record at Sandia Laboratory Receives Set-Back

Sandia Laboratory's safety record of approximately 3 million man-hours worked without a disabling injury ended July 22. An employee sustained bruises to his right hip and twisted his right knee when he jumped backwards to avoid being struck by a vehicle sliding toward him.

The vehicle was towing a heavy generator and was coming to a stop at a gate in Area III when it jackknifed on the wet dirt road.

The employee was treated by Sandia's Medical Organization and at a local clinic. He is now recuperating at home.



COMPLETED PROJECT — This six-man team, involved for almost a year in the creation of a programmed self instructional package on true position dimensioning, reviews final pages of the text. From left are Roy O. Dell (4421), Robert E. Dunlap (3423), Alan D. Bridegam (4412), Don R. Fisher (3132), Robert F. Utter (3132), and Joe E. Taylor (2564). Experimental classes using the training material will start at Sandia this month.

Self-Instruction Training Package

Programmed Drafting Dimensioning Course Created by Sandia Team

A new programmed self-instructional training package, "Concepts of the True Position Dimensioning System," will be used by experimental classes at Sandia Laboratory this month. Almost a year in preparation, the package was created by a six-man team from Design Definition, Manufacturing Engineering, Training, and Technical Information.

Sandia Corporation is one of the leaders in helping establish new drafting standards for national use. The training course is designed to serve as a transition into the new expanded drafting standards, which are expected to go into use this year. Designed for in-plant training for draftsmen, designers, engineers, and inspectors, the package will also be provided to Sandia suppliers.

"Since drawings constitute a language, their translation and interpretation need to be taught in a systematic fashion," Robert F. Utter (3132), team chairman, said. "This drawing language is used in the manufacture and acceptance of all Sandia products. A common understanding of the language is critical. The training package was prepared to provide such an understanding. It is a self-contained, frame-by-frame, programmed course."

Team Members

Other members of the team who contributed to the programmed text are D. R. Fisher (3132), R. O. Dell (4421), A. D. Bridegam (4412), J. E. Taylor (2564), and R. E. Dunlap (3423).

The team started work on the project in July 1962. "First major task was to block out the major topics to be covered and determine the level of understanding needed by the various groups that would use the subject matter," Bob Utter said. "Applying the concepts of true position dimensioning to design, drawing, manufacturing, gaging, and inspection represented a very large task that involved several technical specialties. The primary problem was to teach the basic concepts but to use appropriate applications as examples."

Part of the "new look" in Sandia drawings will be the appearance of symbols to convey much of the information previously contained in extensive long-hand notes on the drawings.

Problems arose in terminology. An example is the word, "datum," a term previously used with multiple meanings. The team developed a system of modifiers such as "datum-feature," "datum-plane," and "datum-axis" to eliminate confusion about exact meanings.

A comprehensive examination or "test" for students completing the course was designed early in the project. "This covered the central concepts of the course," Bob said, "and was used as a criterion for the course evaluation. If the users missed items, the program had failed to teach them."

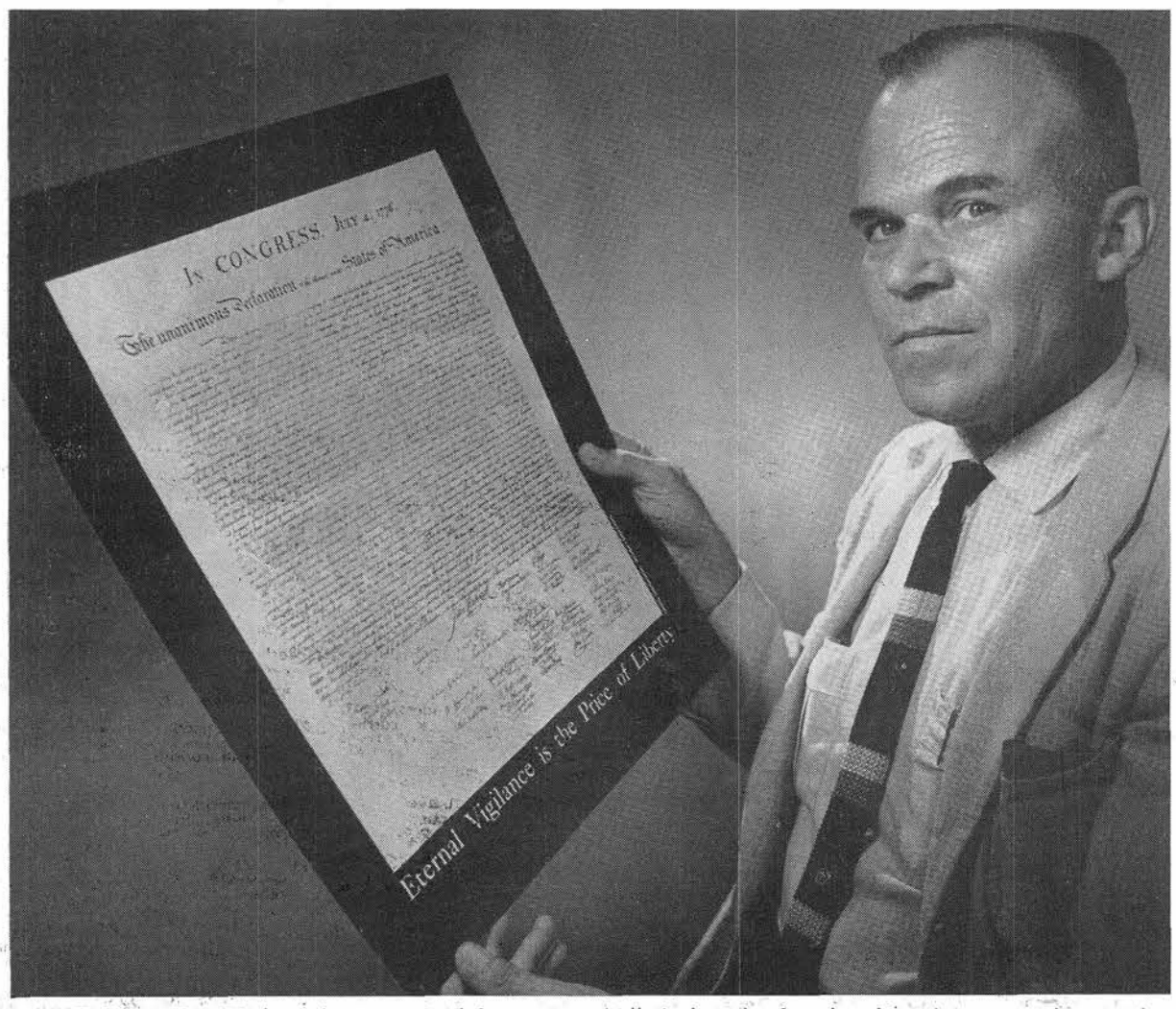
As sections of the course were completed, they were tried with subjects. They were rewritten on the basis of subject responses. "Student feedback is a critical feature of the construction of effective teaching programs," Bob said.

"Extensive coordination was required with existing documents and industry standards," he continued. "We worked with many groups at Sandia and Livermore Laboratories, and with supplier representatives. All these contacts were extremely helpful to the project."

Technical Art Division 3463, Reports Section 3423-4, and Design Definition Section 4413-3 contributed to the project. Production of the text was aided by Graphic Arts Consulting and Programming Section 3462-5.

Problem Exists

"A continuing problem exists in the dimensioning and tolerancing field," Bob said. "The problem of getting the message across is complicated, and a great deal of attention and time has already been devoted to this area. Additional national efforts must be made to get universities, colleges, and technical institutes to include more material on true position dimensioning in their training programs. At the present time, this information is not being widely enough disseminated to be of benefit to engineering students in their early training."



NUMEROUS REQUESTS have been received for copies of the current security poster shown here by A. B. Banks (3244). The poster carries a facsimile of the Declaration of Independence. Security Studies and Education Division will remove the posters from bulletin boards after they have been posted a month. Copies will be available, on a first come first served basis, at the office of the Division in Bldg. 834 in the morning from 7-7:30 a.m. and during the noon hour. Handsome posters complement Early American decor.

Sandia's Safety Record

Sandia Laboratory	Livermore Laboratory
HAS WORKED	HAS WORKED
315,000 MAN HOURS	522,000 MAN HOURS
OR 9 DAYS	OR 96 DAYS
WITHOUT A	WITHOUT A
DISABLING INJURY	DISABLING INJURY